# SOURCES

An International Reference of Supply Houses and Resources for the Chemist

STRIKE

# **SOURCES**

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For questions or comments for Strike and for ordering information, write to:

Panda Ink 2211 NW Military Hwy, Ste. 116 PMB# 115 San Antonio, TX 78213

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Thanks for buying this book. It is the culmination of over a year of intense research and years of personal experience. In the pages to follow you will find almost every possible source for chemicals and laboratory supplies that are available to the public. Enjoy!

#### DISCLAIMER

I don't know if a disclaimer is really needed for this book but I'll throw one in anyway. Do not make drugs or explosives with chemicals. Do not purchase chemicals unless you are licensed and equipped to do so. Do not break any laws regarding the purchase and use of chemicals and other science products. This book does not condone or encourage the violation of any law. This book may be used for information purposes only.

### Who Watches the Watchmen?

I do. Our nation's "watchmen" are the DEA and the State Narcotics agencies. What they do regarding drugs and arrests are irrelevant for this book. What they have done to the public's access to chemicals and science products is very relevant. It is the regulations and, often, illegal intrusions of the DEA that have served to stifle free research. Hell if I'm gonna get into a long spiel about how wrong or right it may be I'm just gonna discuss the implications as they relate to us.

I have stared back hard at the DEA. They are a rogue organization and very resistant to reverse scrutiny. But I have tried very hard to discover as much as I can about them and their effect on chemical sales in the U.S. I hope this chapter will be helpful to you.

#### **ALITTLE HISTORY**

Why should I waste valuable energy writing this when I can quote someone else? The DEA has a website (http://www.usdoj.gov/dea/) with very, very limited information. But there is a little report by the Office of Diversion Control titled "The Diversion of Drugs and Chemicals: A Descriptive Report of the Programs and Activities of the DEA's Office of Diversion Control" (05/96). Your tax money paid someone to type it, so you'd better read it:

The U.S. Drug Enforcement Administration (DEA) is the Federal agency responsible for the administration of these laws. The negotiation of the Hague Convention of 1911 and

the passage of the Harrison Narcotics Act in 1914 marked the beginning of a series of laws and treaties which have evolved into the modern drug laws. The principal existing international treaties are the 1961 Single Convention on Narcotic Drugs, the 1971 Convention on Psychotropic Substances, and the 1988 U.N. Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances. The principal Federal law is the Controlled Substances Act of 1970, which has been amended on several occasions. One of the most significant additions was the passage of the Chemical Diversion and Trafficking Act of 1988 (CDTA) which extended the concept of commodity control to those chemicals most often used for the manufacture and synthesis of drugs of abuse. It should be noted, however, that the controls over chemicals are nevertheless substantially less than those imposed on drugs. In general, the drug laws have their counterparts at the state level and are based on the Federal model. The chemical controls have state counterparts only in states having a clandestine laboratory problem.

The fundamental purpose of these laws and treaties may be described as follows:

- (1) To prevent the diversion of controlled drugs and chemicals into the illicit drug traffic by restricting access through a variety of legal requirements;
- (2) To detect such diversion as occurs through the examination of various records and accountability systems which are required to be maintained; and
- (3) To identify, apprehend, and bring to justice, those persons responsible for diversion, whether through negligent or criminal acts.

Wow! Those are some pretty lofty goals. And the principle act out of all those mentioned that has the greatest impact is the CDTA. Another report by an arm of the Department of Justice called the National Institute of

Justice gives a little more insight on the CDTA. The report is titled "Preventing Illegal Diversion of Chemicals: A Model Statute" by Sherry Green (11/93). I found it on one of the Internet search engines:

#### CHEMICAL DIVERSION AND TRAFFICKING ACT

In 1988 Congress enacted the Chemical Diversion and Trafficking Act (CDTA), Subtitle A of the Anti-Drug Abuse Amendments of 1988 (codified as amendments to the Federal Controlled Substances Act). CDTA established recordkeeping and reporting requirements and authorized enforcement activities for domestic and international transactions in designated precursor and essential chemicals. Originally CDTA regulated machines for making the drugs into tablets or capsules, 12 precursor chemicals, and 8 essential chemicals. Now, 27 precursor and 7 essential chemicals are on the CDTA list. Chemicals may be added or deleted under standard Federal rule making procedures. CDTA applies to any individual or legal entity that manufactures, distributes domestically, imports, or exports any of the listed chemicals. The Act makes the unauthorized trade in these listed chemicals equivalent to trafficking in illegal drugs.

Each chemical has been assigned a threshold amount, by volume or weight, or a threshold number of monthly transactions. Once the threshold has been reached or exceeded, regulated individuals and entities must comply with Federal record-keeping, reporting, and identification requirements. However, threshold quantities do not apply to machinery; distribution of a single tableting or encapsulating machine triggers CDTA provisions.

Among the provisions are requirements that purchasers supply proof of identity in all regulated transactions. The type of identification required depends on whether the customer is new, is an individual or established business, is paying in cash, or is exporting the chemical to another country. Records of regulated domestic transactions involving a precursor chemical or a tableting or encapsulating machine must be kept for 4 years. For an essential

chemical, the record must be kept 2 years. Records must be readily retrievable either at the business where the transaction occurred or some other central location. Each record must contain specific information about the transaction and is subject to inspection and photocopying by the Drug Enforcement Administration.

CDTA requires that regulated individuals and entities report some circumstances both orally and in writing to DEA. These include uncommon methods of payment, loss or disappearance of a chemical, and suspicion that a chemical has been diverted for illegal purposes. As with records, reports must contain the date of the transaction, quantity of the chemical purchased, name and address of each party, method of transfer, and other descriptive details. On the basis of the reports or a lapse in record-keeping, DEA has the authority to stop chemical shipments. Receipt of the required advance notice of shipments can trigger DEA suspension when an illicit transfer is suspected.

Hey, that's just precious. I'll be sure to give credit to the DEA when I discover the cure for cancer. But the DEA is not alone in this enforcement. The States have taken it upon themselves to reinforce the DEA restrictions with some of their own. From the same report:

#### EXISTING VARIATIONS IN STATE CONTROLS

To date 18 States have sought to control the existence of clandestine labs by enacting their own detailed chemical tracking requirements. Some jurisdictions have incorporated these requirements into their controlled substances acts already on the books, while others have adopted new, distinct statutes.

• Number of chemicals: Colorado controls the largest number of chemicals (35) while Montana regulates 9. The differences reflect each State's experience or policy regarding diversion, abuse, and the potential illicit use of a chemical. Nearly all of the States that have controls exclude prescription or over-the-counter drugs, or both, from chemical requirements, with special exemptions for ephedrine, pseudoephedrine, norpseudoephedrine, and phenylpropanolamine.

- Registration: All 18 States require a license or permit to lawfully manufacture or transfer a regulated chemical. Only a few regulate the purchase or possession of chemicals. Registration renewal generally happens annually and involves a reasonable fee; the definition of reasonable varies from a maximum of \$25 in Arkansas to a minimum of \$250 in New Mexico. Grounds for denial, suspension, or revocation include fraud; drug law violations and convictions; and denial, suspension, or revocation of Federal registrations.
- Record-keeping: Differences also occur in the requirements for record-keeping. For example, several jurisdictions mandate that chemical transfer records be kept for 2 years after the transaction date, but Minnesota requires that records be kept for 5 years. Texas requires that records of sales of laboratory apparatus also be kept. Hawaii and Missouri maintain the confidentiality of information obtained through records. Pennsylvania penalizes wrongful use of the information.
- Reporting: Required reporting of intrastate transfers and out-of-state purchases also varies among States. In several States the regulatory agency must be given 21 days advance notice of any chemical delivery. Some States provide a monthly reporting alternative for individuals and entities with a history of lawful use, a regular relationship with a recipient, or both. While California and Montana require notice of receipt of chemicals within 3 days after delivery, Oregon allows 10 days. Ten States require that special reports be submitted within 3 days after discovery of a theft or loss of chemicals, and eight require reports within 3 days for a discrepancy in quantities shipped and received. Iowa and Washington extend these deadlines to 7 days.
  - · Exemptions: Medical professionals, agents, and

licensed entities such as common carriers are traditionally exempt from licensing or reporting obligations. Some States expand the exemptions to include college chemistry students, government employees, or researchers.

- Purchaser identification: Most jurisdictions mandate that individual purchasers identify themselves with a photograph, proof of street or residential mailing address, and signature. Some jurisdictions ask for the purchaser's birth date, driver's license or other state-issued identification number, year in which the purchaser's vehicle was manufactured, and vehicle license tag number. Most business recipients must furnish an authorization letter listing an identification number, an address, a phone number, and a description of the chemical's intended use.
- Responsibility: Finally, there is no consensus among the States on which government agency should be given regulatory responsibility. The 18 States assign this duty to a wide variety of health, pharmaceutical, commerce, and enforcement agencies."

What does this mean for your state? I dunno. As far as Texas is concerned, I know that the state only restricts the same chemicals the DEA lists. Not any more or less. It is still a little confusing to me as to who is doing the regulating in my particular state (TX). I know that if I wanted to get a restricted chemical I have to get a permit from the state to do so (not a recommended thing to do by the way). That is all the chem stores in my state require to sell me restricted chemicals. I suppose a DEA permit would work as well but is probably something for national companies or something.

About the only other specific state restrictions I am aware of is the one for California whereby if anyone buys over \$100 dollars in chemicals or labware the lab store has to take the driver's licence ID of the buyer. They won't report the sale. They just need to take an ID with it. All purchases below \$100 don't require ID.

#### YEAH? SO WHAT?

OK. The Feds have stated their case. Sounds cool. Sounds scary. Now let's see what I have found from years of practical experience buying chems and from digging around the chemical community and law enforcement agencies. And let's see just how these shiny new laws are being applied. Don't worry, folks. It ain't no big thang!

As private researchers, we are predominantly concerned with what scrutiny we are placing ourselves under when we buy chemicals and science stuff. So let's start where it all begins: the lab supply store. I have physically visited many of them. I have called hundreds of them. The situation is always the same. In every store.

Posted in every lab store, chem distributorship or manufacturing plant is a single, yellow sheet of paper that the DEA has sent to them. Printed on the paper is the List I and List II Scheduled Chemicals that the DEA wants restricted. Table I is an exact replica of the most current list as of early 1998. The only difference is that late-breaking word from the DEA has it that iodine crystals and HCl gas will be added to the List II compounds in the very near future so I have added them to the table here.

#### TABLE I. LIST I AND LIST II CHEMICALS

#### LIST I CHEMICALS

Anthranilic Acid N-Methylpseudoephedrine

Benzaldehyde Nitroethane

Benzyl Cyanide Norpseudoephedrine
Ephedrine Phenylacetic Acid
Ergonovine Phenylpropanolamine

Ergotomine Piperidine Ethylamine Piperonal

Hydroiodic Acid (57%) Propionic Anhydride Isosafrole Pseudoephedrine

Methylamine Safrole
N-Acetylanthranilic Acid MD-P2P

N-Methylephedrine

#### LIST II CHEMICALS

|                        | THRESHOLD BY VOL. | THRESHOLD BY WT. |
|------------------------|-------------------|------------------|
| Acetic Anhydride       | 250 gal           | 1,023 kg         |
| Acetone                | 50 gal            | 150 kg           |
| Benzyl Chloride        | N/A               | 1 kg             |
| Ethyl Ether            | 50 gal            | 135.8 kg         |
| Methyl Ethyl Ketone    | 50 gal            | 145 kg           |
| Potassium Permanganate | N/A               | 55 kg            |
| Toluene                | 50 gal            | 159 kg           |

List I Chemicals (a.k.a. Schedule I Chemicals, a.k.a. Precursor Chemicals) are all illegal to own or buy in any quantity without a DEA or State Permit. List II Chemicals (a.k.a. Schedule II Chemicals, a.k.a. Essential Chemicals) can be purchased legally in amounts below the limits stated in Table I. But if you want to buy amounts of List II chemicals above the thresholds given in Table I, then you're gonna need that DEA or state permit.

Most lab stores simply refuse to sell List I and List II chemicals because of the stigma they carry. This includes sales to people with permits. That is just fine in my book. No one has any business buying List I and List II chemicals, nor does anyone have any need for the chemicals these days.

In fact, I have a greater trust in companies that do this. This is because they are limiting the potential for abuse by customers, thus freeing themselves to more confidently sell the rest of their chems and products.

#### DO LAB STORES REPORT CHEM SALES?

No! They are businesses just like any other. They sell products and have hundreds or thousands of customers. They have only one set of restrictions: the little yellow sheet of List I and List II chemicals. These are the only marked products they are aware of.

I have point-blank asked many, many lab store owners what they do about purchases of List I and List II chems. They were all very forthcoming

in their answers. The answers were always the same. The lab stores of the United States have only two contingencies:

- (1) They simply refuse to sell List I and List chems.
- (2) Those that do sell List I and List II chems keep records on file of the purchases for inspection by the DEA or State Narcotics.

Do the lab stores call the DEA or State Narcotics when a List I or List II purchase is made? No. Absolutely not. The lab stores tell me that they do only what is required of them by law. And that is to file away the particulars of the sale for on-site inspection by narcotics agents (this usually occurs every 1-3 months), or to mail off copies of the List I and List II purchases to the DEA every other month.

Yes, folks, that is the extent of the scrutiny that is placed on you by the chemical sales agents of this country. Any other chemical purchase is fair game. And why shouldn't it be? All chemicals aside of the List I's are perfectly legal to purchase and own! You may continue to waste time conjuring up mystery conspiracies that do not exist. But I'm telling you to stop. It is all up to the DEA to determine what sales are suspicious. The lab stores and chem companies don't have a clue.

#### "WATCHED CHEMICALS"

Here is the truth you have been waiting for. The nebulous threat of "watched chemicals" has been spooking chemists for years. No one seems to know for sure what they are or who is watching them. Well (tee hee), I do.

Being sick to death about this whole matter, I marched my ass over to the local science house and demanded to see the manager. I explained that as a private researcher I was sick of the narcotics agents always coming to my house and bugging me and my family every time I ordered a watched chemical. I pointed to the little sheet of List I and List II chems above his sales counter and asked to know where the list of "watched" or "suspicious" chemicals were, because I wanted to avoid their sales in the future.

The manager sympathized with my predicament and said that he did not like the DEA intrusions on his store as well. He explained to me the DEA routine of checking his records and what he knew that they looked for. But he had no idea what any watched chemical was. Never had his company been instructed by the DEA regarding anything other than the List I and List II chemicals. I thanked him and bought some filter paper to show my appreciation.

I did four other on-site visits to chem companies in my state. None knew a damn thing about 'watched' chemicals. I contacted out-of-state companies. No dice. I contacted the owners of seven "rogue" lab stores who would definitely NOT withhold privileged info. They too knew nothing about it.

In fact, no one knows what chemicals are "watched" EXCEPT the DEA. And the DEA wants it this way. Why should they tip their hat to lab stores or the public and give up their element of surprise? That's how they make busts: by scrutinizing the public and not letting them know what they are being scrutinized over. Sound criminal? You bet! And it probably is antithematic to the Constitution.

So, as a public service announcement and as a protective defense against unwarranted search, I give you the list of watched chemicals that you are not supposed know about in the Watched Chemicals List.

#### WATCHED CHEMICALS LIST

Acetaldehyde, Acetamide, Acetaminophen, N-Acetyl Anthranillic Acid, Alumina (activated), Aluminum Chloride, Aluminum Oxide, Aluminum Powder, Ammonium Formate, Ammonium Nitrate, Aniline, p-Anisaldehyde, Arsenic Metal, Arsenic Pentoxide, Arsenic Trichloride, Arsenic Trioxide, Benzene, Benzocaine, Biotin, Boron Trifluoride, Bromine, Bromobenzene, Brucine Sulphate, Butylamine, gamma-Butyrolactone, Caffeine, Calcium Metal, Calcium Carbide, Calcium Hydride, Carbon Disulfide, Carbon Tetrachloride, Chloroacetone, Chloroform, 2-Chloropyridine, Chromium Picolinate, Citral, Cyclohexanone, Dichloroacetic Acid, Diethyl Malonate, Diethylamine, Digitonin, Digitoxin, Dihydroxyacetone, Dimethyl Sulfate, Dimethyl Sulfoxide, Dinitrochlorobenzene, Diphenylacetonitrile, Epinephrine, Epinephrine Bitartate, Estradiol, Estriol, Estrone, Ethinyl Estradiol, Ethylacetoacetate, Ethyl Alcohol (190-200 proof), Ethyl Magnesium Bromide, Ethylenediamine, Folic Acid, Formamide, Formic Acid, Freon, Gallic Acid, Glycolic Acid, Guaifenesin, Hexachlorophene, Hexyl Resorcinol, Hydrazine, Hydrazine Dihydrochloride, Hydrazine Hydrate, Hydrazine Sulfate, Hydrobromic Acid, Hydrochloric Acid (ups, nf, fcc grades), Hydrocortisone, Hydrofluoric Acid, Hydrogen Peroxide 30% & 50%, Hyoscyamine, Ibuprofen, Indole, Inositol, Iron Filings, Ketoglutaric Acid, Lactose, Lead Acetate, Lidocaine, Lithium Metal, 3,5-Diiodosalithium, Lithium Acetate, Lithium Aluminum Hydride, Lithium Bromide, Lithium Carbonate, Lithium Chloride, Lithium Chromate, Lithium Citrate, Lithium Cobalt, Lithium Dodecyl Sulfate, Lithium Fluoride, Lithium Hydroxide, Lithium Lactate, Lithium Metaborate, Lithium Nitrate, Lithium Oxalate, Lithium Perchlorate, Lithium Sulfate, Lithium Tetraborate, Lycopodium, Magnesium Metal, Magnesium Turnings, Mannitol, Megestrol Acetate, Mercuric Acetate, Mercuric Bromide, Mercuric Chloride, Mercuric Cyanide, Mercuric Iodide, Mercuric Nitrate, Mercuric Oxide, Mercuric Oxycyanide, Mercuric Sulfate, Mercuric Sulfide, Mercuric Thiocyanate, Mercurous Chloride, Mercurous Nitrate, Mercurous Sulfate, Mercury Bichloride, Methylformamide, Methylprednisolone, Methylpropylamine, Methylsulfoxide, Methyltestosterone, Miconazole Nitrate, Naproxen Sodium, Niacin, Niacinamide Ascorbate, Nicotinamide, Nifedipine, Nitrofuranation, Nitromethane, Nystatin, Oxalyl Chloride, Palladium Black, Palladium Metal (powder), Palladium on Alumina, Palladium on

Charcoal, Papaverine HCl, Peracetic Acid, Perchloric Acid, Petroleum Ether, Phenacetin, Phenol, Phenyl Magnesium Bromide, Phenyl Magnesium Chloride, Phenylalanine, Phenyl Mercuric Acetate, Phenyl Mercuric Borate, Phenyl Mercuric Chloride, Phenyl Mercuric Nitrate, Phenyl Mercuric Salicylate, Phosphorus Oxychloride, Phosphorus Pentachloride, Physostigmine, Phytonadione, Picric Acid, Pilocarpine, Potassium Chlorate, Potassium Cyanide, Potassium Nitrate, Potassium Perchlorate, Potassium Permanganate, Proxamine Hydrochloride, Prednisolone, Prednisone, Pregnenolone, Prilocaine, Procaine, Progesterone, Promethazine Hydrochloride, Propenylbenzene, Propionic Anhydride, Propranolol, Pyridine, Pyridoxal, Pyridoxine, Quinine, Raney Nickle, Reserpine, Riboflavin, Salicylic Acid, Scopolamine, Selenous Acid, Sodium Acetate, Sodium Azide, Sodium Borohydride, Sodium Chlorate, Sodium Chlorite, Sodium Cyanide, Sodium Fluoride, Sodium Iodide, Sodium Metal, Sodium Nitrate, Sodium Nitrite, Sodium Perchlorate, Sodium Peroxide, Sodium Sulfate, Sodium Sulfathiazole, Strychnine, Styrene, Sulfanilamide, Sulfathiazole, Sulfur Trioxide, Theophylline, Thionyl Chloride, Titanium Tertachloride, p-Toluenesulfonic Acid, o-Toluidine, Trichloroacetic Acid, Trichlorotrifluoroethane, Trifluoroacetic Anhydride, 3,4,5-Trimethoxy Compounds (Any!), Tryptophan, Vitamin A Acetate, Vitamin E, Vitamin E Acetate.

Sorry I couldn't put that in a tabular format. It would've taken too many pages. The information in the list was pulled from both the DEA and the California Department of Justice. Some of the entries are watched because of their potential for mass poisonings or bomb making. But the bulk of the list is for drugs.

Right now I can see a bunch of you running around in circles screaming because you've realized you've ordered half of the shit on that list. And I'm at a loss to explain it. No one has busted me for ordering the stuff. No one I know who has ordered things of this nature has gotten busted on account of them.

I leave it up to you to judge how you may approach ordering these chems. My personal take on all this is that any one, two or possibly three of these chems ordered together would not be suspicious unless they were ordered in very large amounts or they were known to have specific uses when ordered together.

The best advice I can give you is from a warning notice I found on the "Sales Policy" web page of a very friendly and forthcoming laboratory supply company:

We do not wish to end up in court as a witness for the prosecution against you. Sorry, but we really don't need the business that bad. If you're interested in buying items which can be used for making explosives or illicit drugs, please be aware of the following: the California State Department of Justice and the various Federal agencies regularly review our sales for patterns of purchases which may lead to an arrest. In California knowingly selling any item which is then used in felony drug or bomb making is a felony also for the seller. Enough said. Go elsewhere to buy these items.

Finally, it is worth noting that someone, somewhere once said he hoped the government would place every chemical under suspicion or restriction. I agree because it would negate its own intentions. And let me tell ya-that Watched Chemical List is huge! It is, in fact, prohibitively huge. And the bigger it gets, the sillier and more useless it becomes. Keep it up guys!

#### MCA

Since the enactment of the CDTA there really hasn't been much of anything else regarding further restrictions on chemicals and their sales. Over the years the DEA has simply tacked on a few extra chemicals to the List I and List II and that's about it. However, in 1996 Congress passed the Methamphetamine Control Act. The DEA homepage explains:

On October 3, 1996, President Clinton signed into law the Comprehensive Methamphetamine Control Act of 1996 (MCA). The MCA broadens controls on listed chemicals used in the production of methamphetamine, increases penalties for the trafficking and manufacture of methamphetamine and listed chemicals, and expands controls to include the distribution of lawfully marketed drug products which contain the listed chemicals ephedrine, pseudoephedrine and phenyl-propanolamine (PPA).

The last part of the statement is very true. This act is almost entirely geared towards the eradication of large purchases of ephedrine, pseudoephedrine and phenylpropanolamine. Lots of registration requirements for businesses that sell these precursors and new, very restrictive threshold limits on purchases. To clarify this Act in these matters the DEA posted a FAQ. Here are some of the most pertinent questions and answers regarding the sales of ephedrine products to citizens:

## Q. How do I determine whether I am considered a retail distributor?

A. The MCA defines a retail distributor as a grocery store, general merchandise store, drug store, or other entity or person whose activities as a distributor of legal drug products containing listed chemicals are limited almost exclusively to sales for personal use, both in number and volume of sales, either directly to walk-in customers or in face-to-face transactions by direct sales. (Personal use is defined as sub-threshold sales of less than 24 grams to an individual for legitimate personal use.)

## Q. I sell pseudoephedrine, phenylpropanolamine, and combination ephedrine products in my convenience store. Am I required to register or keep records of the sales?

A. Requirements with respect to combination ephedrine products went into effect on October 3, 1996; the requirements pertaining to pseudoephedrine and PPA do not go into effect until October 3, 1997. However, the DEA

has proposed to exempt retail distributors from the registration requirement. If you will engage in any above-threshold transactions, then you must maintain a record of each of these transactions.

What this means is that if the grocery store agrees 'in principle' (i.e., simply gives their word) that they will only sell 24 g or less per person then they do not have to apply with the DEA and get a stupid registration number to allow them to sell more. Getting one of these numbers costs money and makes the business a DEA target. Ergo the businesses don't want it.

Q. The new law states that there is a limit of 24 grams on retail sales of pseudoephedrine, phenylpropanolamine, and combination ephedrine products How much is that and can I sell more in a single transaction without getting in trouble?

A. The limit of 24 grams on retail sales does not pertain to blister packs of pseudoephedrine and phenylpropanolamine. The reference to a limit of 24 grams is actually a threshold and not an absolute cap on the quantities which may be sold. You may sell more than 24 grams in a single transaction, however, a record will be required to be maintained and the fact that you engage in such a transaction(s) may jeopardize your status as a 'retail distributor' (see response on previous page on this issue). If you no longer qualify as a 'retail distributor', you will be required to be registered.

See! Just like chem sales of reportable yet **legal** items, ephedrines can be sold in whatever amount the business wishes. But the charming DEA is 'threatening' them if they choose to legally sell legal ephedrine products above the 'threshold' the DEA wishes upon them. In other words, the DEA will try to shut down a person's business if they obey the law yet piss off the DEA. The only way to avoid this is to enslave your business to the scrutiny of the DEA by registering with them.

Is the DEA above the law or what?!

The next step up from retail is the 'wholesaler' or distributor (i.e., anyone selling ephedrine products in quantities larger than 24 g). These businesses are registered with the DEA in order to sell these amounts. And different, more restrictive rules apply to them:

- Q. I distribute by mail and/or delivery to non-regulated persons (i.e. consumer or end user). When must my firm begin to report sales of pseudoephedrine, phenylpropanolamine and combination ephedrine products? Do I have to report all of my sales? What information should be included and to whom do I send these reports?
- A. Yes, the requirement to report all such distributions is currently in effect. Therefore, on a monthly basis, reports should be filed with:

The Chemical Operations Section
Office of Diversion Control
U.S. Drug Enforcement Administration
Washington D.C. 20537.

The DEA has issued a Federal Register Notice to provide further guidance on how to report to DEA. This Notice provides guidance on what information should be included in these reports.

- Q. Who is required to submit reports on a monthly basis of each transaction conducted during the previous month involving ephedrine, pseudoephedrine and phenylpropanolamine products?
- A. Any distributor who engages in a transaction with a non-regulated party (i.e. consumer or end user) via Postal, private or commercial carrier, is required to submit a monthly report of all such transactions to DEA.
- Q. What threshold applies to such transactions for reporting purposes?
  - A. All such transactions must be reported regardless of size.

#### Q. What threshold applies for record keeping purposes?

A. The record keeping threshold for the distributors required to report transactions to DEA on a monthly basis is 24 grams for combination ephedrine products. This is a non-cumulative threshold.

The record keeping threshold for non-retail distribution (by persons not required to report to DEA on a monthly basis) of combination ephedrine products is I kilogram. (Cumulative threshold provisions of the CSA apply to this I kilogram threshold.) Please note, however, that the record keeping threshold for single entity ephedrine products is zero.

Record keeping requirements for pseudoephedrine products and PPA products do not become effective until October 3, 1997. At that time, the record keeping threshold will be 24 grams for these distributors.

There are a lot more bullshitty rules and regulations regarding those products, but those Q&A's pretty much summed it up as to how the consumer is scrutinized regarding ephedrine product sales. And that is mainly the scope of the MCA. Almost all of it is ephedrine control. They even go so far as to give a profile for suspicious persons' orders to the ephedrine manufacturers. And even though the profile was for drug companies, it provides a valuable example of what the DEA considers suspicious regarding any type of ordering. Check it out and learn:

## Question: What constitutes a Suspicious Order and how can Suspicious Orders be easily recognized?

Answer: The DEA has frequently been asked for guidance on what constitutes a suspicious order. Repeated below are the items identified in the Chemical Handlers Manual, pending reprint. This material is useful and will be supplemented with the results of the work of the Suspicious Orders Task Force created under the Methamphetamine Control Act.

The reporting of a suspicious order is required by the Controlled Substances Act and is of primary importance to DEA in limiting the availability of listed chemicals in the illicit traffic. Each regulated person is most familiar with its customers and the circumstances surrounding the orders it processes. The chemical industry must use its best judgment in identifying suspicious orders. The following are provided in order to assist the industry in identifying suspicious orders:

- 1. An individual who desires to pay cash and wants to pick up the chemical(s).
- 2. An established customer who deviates from previous orders or ordering methods.
- 3. A new customer or unfamiliar representative of an established customer who orders listed chemicals.
- 4. A customer who has difficulty in pronouncing chemical names.
- 5. A customer who is vague about its firm's address, telephone number, and reason for desiring a listed chemical.
- 6. A customer who wants a listed chemical shipped to a post office box or address other than the usual business address.
- 7. A customer who prefers to pay by cashier's check, postal money order, etc.
- 8. A customer who will not furnish references or who is vague about furnishing references for credit purposes.
- 9. A customer who desires listed chemicals for reasons at variance with accepted legitimate industry practice.
- 10. A customer who is not a member of a trade, professional, or business association.

- 11. A customer who furnishes false or suspicious addresses, telephone numbers, or references.
- 12. A customer who refuses or is reluctant to establish a credit account or provide purchase order information.
- 13. A customer whose communication either by telephone, mail, or other means is not conducted or prepared in a professional business manner.
- 14. A customer who requests unusual methods or routes of shipment or who provides unusual shipping, labeling or packaging instructions.
- 15. A customer who purchases unusual quantities or combinations of chemicals or glassware in contrast with customary practice and usage.
- 16. A customer whose stated use of listed chemicals is incompatible with destination country's commercial activities or consignee's line of business.
- 17. A customer with little or no business background information available.
- 18. A customer using a freight forwarder as ultimate consignee.
- 19. The use of intermediate consignee(s) whose location or business is incompatible with the purported end user's nature of business or location.
- 20. Evasive responses to any questions, or responses that indicate a lack of basic knowledge of the industry, or inability to supply information on whether listed chemicals are for domestic use or export. This list is not all inclusive. It is ultimately the responsibility of the supplier to recognize a suspicious order."

Whatever! Sounds like. . . well. . . everybody! There are a couple of

reminders regarding List I and List II chemicals that were of interest:

## Q. How long are records required to be kept for List I and List II chemicals?

A. The MCA reduced the record retention requirement from four years to two years for List I chemicals. Therefore, all chemical records are subject to a two year retention period.

## Q. When can my firm begin to keep only two years of sales records for listed chemicals?

A. Immediately. Effective October 3, 1996, regulated persons need not maintain records for more than two years.

## Q. What types of identification am I required to obtain from my customers?

A. For sales to individuals, the type of documents and other evidence of proof must consist of at least the signature of the purchaser, a copy of a driver's license and one other form of identification. (For specific guidance, see 21 U.S.C. Section 1310.07)

#### Q. If I supply a threshold amount of a List I chemical to a customer who also sells the List I chemical over threshold amounts, do my records have to have my customer's DEA registration number?

A. Yes, your records should include your customer's registration number. If the customer has applied for a DEA registration and has not yet received that registration, you should obtain confirmation that the customer has applied for that registration. In such instances, a copy of the application for registration will suffice.

I don't know about you, folks; but none of this makes a single bit of difference to me. It does not change the legality of all the chemicals necessary to do research. It does not hinder, as it rightly should not, the

public's access to the tools of science. And it does not impose any greater scrutiny than that which I am already accustomed to. In fact I...I...What the hell is this!!!:

The MCA provides for the publication of a surveillance list which contains chemicals, products, materials, or equipment used in the manufacture of controlled substances and listed chemicals. These items and all listed chemicals are referred to as "laboratory supply". (Note that the phrase "listed chemicals" includes legal drug products containing listed chemicals and chemical mixtures.)

The DEA is currently preparing this surveillance list. The MCA provides for a civil penalty of up to \$250,000 for the distribution of a laboratory supply to a person who uses, or attempts to use the laboratory supply to manufacture a controlled substance or a listed chemical, if that distribution was made with "reckless disregard" for the illegal uses to which such a laboratory supply will be put. In addition, any person who distributes a listed chemical or any other chemical, product or equipment knowing, or having reasonable cause to believe, that it will be used in the illegal manufacture of a controlled substance is subject to criminal prosecution.

Well lookee here! An ultra-secret, confidential, for-your-eyes-only DEA naughty list. Just what I always wanted! Apparently so do a lot of other people because the DEA had to ask itself:

## Q. What is the Special Surveillance List? When will the Special Surveillance List be published?

A. The MCA provides for the publication of a surveillance list which contains chemicals, products, materials, or equipment used in the manufacture of controlled substances and listed chemicals. These items are referred to as "laboratory supply". The DEA is currently preparing this surveillance list.

Are they really preparing this list? I'm beginning to wonder. It has been over a year and a half since the MCA was enacted yet this Special Surveillance list has not yet been made. No lab company knows what the hell I'm talking about when I mention this. No DEA official knows about this list. I know because I called every one of the twenty-one Field Diversion offices on the nation. In fact I had to literally explain to the agents what the MCA provision was in the first place. Only one agent, a lady in the New Orleans division had heard about it. She says it was not in existence. Well, when it is, I will expose it. Meanwhile, all of you citizens should press the DEA hard for this list: especially you lab store owners.

Why? Well, you lab store and chem company folks take another look at that little provision that comes with this 'List':

The MCA provides for a civil penalty of up to \$250,000 for the distribution of a laboratory supply to a person who uses, or attempts to use the laboratory supply to manufacture a controlled substance or a listed chemical, if that distribution was made with "reckless disregard" for the illegal uses to which such a laboratory supply will be put. In addition, any person who distributes a listed chemical or any other chemical, product or equipment knowing, or having reasonable cause to believe, that it will be used in the illegal manufacture of a controlled substance is subject to criminal prosecution.

The last two lines are significant. The DEA is threatening (what else is new) the lab stores with both civil and criminal federal prosecution if they sell any product (not just chems) that they may have a 'reasonable cause' to believe that they will be used in a crime. In other words, the DEA is threatening to imprison lab store folks for not being able to read the minds of their customers!

Absolutely despicable!

The implementation of these sorts of things does take time though. I have recognized a general trend in the industry in this regard. The DEA is very slow at getting things done as evidenced by the lack of output regarding the 'Secret Surveillance List'. And even when implemented, the DEA is demonstrably lapse in enforcing the things they threaten.

#### HOW SUCCESSFUL WILL ALL THIS BE?

Not very. None of the laws before and none in the future will ever truly work. Wanna know why? It is due to two factors.

The first is the backlash all this bullying by the DEA is causing. As evidenced by the threats above this has become very significant. Almost every lab store, chemical distributor, chemical manufacturer, glassware manufacturer and pharmaceutical company that I have talked to despises the DEA (Are you boys listening to this?). They detest the unwarranted search of their premises and records. They detest having to pay exorbitant fees for DEA licenses and the scrutiny it puts them under. They detest the threats and the coercion to police their customers. But most of all, they abhor having to vastly limit their sales. Selling stuff is, after all, how they make money. And I am telling you right now that the lab stores try to sell as much as they can to whomever they can regardless of what the DEA says. They play along with the DEA in the most minimal way possible because it is their livelihoods at stake. And that, my friends, segues us to the second and most powerful deterrent of all.

The enormity of commerce. Global in its size. Pervasive in every aspect of our lives. The DEA could no more stop a chemical from being obtained than it could stop the American public from doing drugs. Sales must be made. Companies have bottom lines to meet. And there are just so goddam many ways and sources to get a chemical (any chemical) that a mere government agency hasn't a chance. That is what this book will expose. Enjoy!

## **Strategies**

Okay folks, here we go! As legal and responsible private researchers you have little to fear when approaching and ordering from a chemical company. And I am telling you straight-up that the easiest 'strategy' would be to just call up the company and order your shit. Right?

Probably not! I'm assuming that every one of you are probably still nervous as hell and would like some really badass professional pointers. I can dig it, and I'll tell you what I know.

I will allow myself that I was pretty good at getting chems and stuff before writing this book. But after having to gain the confidences of literally hundreds upon hundreds of different chemical and labware companies while doing my research for this book, the old knowledge base got pretty extensive. To make things interesting, I tried to use a different approach or story with every store so that all of you can have a lot of ideas to draw from.

Again, it has to be stated for the record that these strategies, although coercive and subversive in appearance are, in fact, unfortunate necessities that people may have to adopt in order to protect themselves and the chemical companies. It is a twisted manifestation of the War on Drugs. If legal, legitimate researchers allow the government any leeway to suspect them of something, then the stigma and harassment will never end. It will also vicariously bring harassment to the chem company that deals with the researcher.

If you are doing legal, legitimate private research, and are buying only legal items, then it is not anybody's business who you really are or what you are doing. Not the chem company's. Not the government's. Nobody. So let's keep it that way and everybody will be happy. Well. . . almost everybody.

#### CATALOGS

Now, as I said, one can just jump right into things and order their stuff, no sweat. There's a few hundred places listed later on that I feel one can do just that. But, like home research itself, a little time and patience will pay off nicely. A good start is to get a few catalogs!

Ilove catalogs! Ican never get enough of them; but after writing this damn book I don't think I want to ever see one again. Yeesh! To give all of y'all a more comprehensive look into the stores this book endorses, I had to order each place's catalog. I've got catalogs in my bedroom, in the living room, and always in the bathroom. My fucking chihuahua sleeps next to a pile of them. But it would serve you well to get a few yourself. Any catalog is always a good reference source. There's info and specs on chemicals. Periodic tables, and lots of handy knowledge about most of the items. Some of the larger catalogs from the bigger science houses can literally substitute for some text books. And they're free to boot!

The best advantages to having a catalog are that they provide the home chemist with valuable inside info about the company and that they contain the actual catalog numbers for the company's products and chemicals. Yes, you can call up a lab store and ask for just any old bottle of acetic acid, but if you call up and demand a particular Baxter ACS grade Acetic Acid Catalog #XXXXX-XX then you have already articulated yourself as being higher up in the scientific food chain. Why? Well, it demonstrates to the lab store that you have obviously done business with Baxter before because you have their catalog and you have come to expect certain products of theirs.

Take some time to look through your catalog. Note the names and addresses of distributors in the back. Look at some of the manufacturer's products that the catalog offers. This gives you a little education about the company. So come time to order, you can lay on a little scientific professional-to-scientific professional chitchat with the lab company operator:

"Yeah, I prefer Baxter because they carry Bumble Bee brand nuclear reactors."

"... And so I says to The Company In The Next Town Inc., I says 'Since ya can't get me my orders right, I'm just gonna have to call etc., etc. ..."

#### Get the picture?

So how does one get some catalogs? Just call up the company and ask for one. They are more than happy to send you one. Even the giant super houses like Baxter, Aldrich, J.T. Baker, VWR, etc. will be more than happy to send you one of their own. And why would those giants send a catalog to a private individual? An individual they would never sell a thing to? Because the private individual is going to tell them that she is a business.

This is your opportunity to flash the credentials of your enormous fictitious company to those mega science houses and get away with it. You see, you're not yet opening an account with them nor are you ordering any chemicals from them. You are soliciting the promise of being a potential new customer. Ergo, they don't care who you are (as long as you say you are some kind of business). They have no reason nor need to check your credentials. And they will send you your big, fat new catalog right away.

When dealing with the mega science houses, by all means make the address of your fictitious business be your actual home address! Since all you're doing is ordering their catalog (with that being all that you will ever do with them), then there is no need for a characle regarding that aspect. No,

there is no catalog ordering police. Yeesh! It's just nice to get some mail at home once in awhile.

The second source of catalogs are gonna be all of those little/mid-size lab stores listed in the **Laboratory Supply** sections. With few exceptions, all of these companies distribute products for the mega science houses. This means that most of these independent companies also give out the actual mega-science house catalogs to customers. Hey, science is big business and name recognition is part of the game. To encourage this practice, the mega science houses will have their catalogs printed up with the name and address of the little independent store on the front or back cover of the catalog. They send a bunch of these catalogs to the independent lab stores for free so that the independent lab stores can then hand them out to their own customers for free. And that is just what they do.

Getting the mega science house's catalogs from your local neighborhood lab store is a good thing. But one should also be aware that many lab stores carry their own personal inventory of chemicals which are usually stored in some warehouse attached to the storefront. Indies like to slowly stock up on surplus chems or buy discount private label chemicals. ("Private label" is when a lab store buys a bulk quantity of a certain chemicals straight from the manufacturer at a really low price. They then have the bulk chemicals parceled out into smaller, retail-sized bottles, slap a label on the bottle with their company's name on it, and call it their own.) Indies that do this will have their own personal in-house catalog which they also will hand out for free.

When calling an Indy for catalogs, always ask if they have an in-house catalog. Nothin' puts you on the good side of an Indy operator better than ordering a few items from their in-house catalog. They make more money that way. They are happier. You will be happier. And even though there is nothing any more special about their repackaged chemical than that from big name manufacturers, call 'em up and tell 'em it's the best damn chemical you ever had. They'll be as giddy as schoolgirls!

Now then, getting catalogs from an Indy takes on a greater importance for the home chemist than does getting them from the mega science houses. About 95% of you will end up ordering your supplies from an Indy. Maybe the very one you're requesting a catalog from. So it's time to make your first big decision on how you want to represent yourself. Are you confident enough to give your real name and address and just be totally honest about your being an independent researcher? (For most of the companies I list here that will be just fine). Will it be a friend's house? A business front using a mailbox center? Other?

I cannot answer this because this one is up to you. Personally, I would use whatever address I wished *but* I would say I'm a business and give them a fake business name. By simply doing this something magical will occur! Check it out. . . .

You know how I said that it was OK to front a fictitious company name to the mega science house in order to get their catalog? I said this because no one is going to check your fake company's credentials because all you are doing is ordering a catalog. The same is true for a lot of Indies. Although a majority of the companies listed in this book have been pre-screened by me as ones that sell to individuals, there are still hundreds across the nation that will (reluctantly in my opinion) only sell to businesses. If one were to front a fake company name and order a catalog from these or any other Indy company, then something really weird happens. They enter your company name and whatever address into their computer system and send you a catalog. Believe it or not, your company is now sandwiched in with all of the other 'established' customers on their system. You are now an "established" customer! You have bypassed any credential checks that a company may have simply by ordering a catalog first instead of trying to blast your way in and ordering chemicals right off the bat.

When it comes time to order your first set of whatever, you just call up the company and give 'em your fake company name. They see it on their computer and bingo, you're good to go. If they ask if you have an account (an omnipresent question that is often asked), just say: "Well, yes. It should be under 'Fake Company Name." This will prompt them to search their records (had they not done so already) and there your company's name will be. Get it?!

A final and important courtesy when getting catalogs is to just flat out offer to buy them. Even though policy is to hand them out, catalogs are often big books that aren't cheap to publish. Companies are so used to liberally handing them out pro bono, that it is refreshing and flattering for someone to offer to pay for them. Of course they will reject your offer and send you one for free. But many, especially the small companies, will take note and remember you for your generosity. I'm totally serious!

#### YOUR NEW HOME

The second and most critical decision a home researcher has to make before attempting any ordering is where all this stuff is going to be sent. Again, home research, no matter what nature it is, should not have need of *any* illegal, watched or restricted items. Since that is an indisputable fact, it would seem that there is no need for a charade of any kind. WellIllII. . . Not with the DEA around it isn't.

The DEA and State Narcotics have granted themselves unprecedented, and arguably unconstitutional, invasion of privacy rights in regards to businesses and the citizenry. If they get desperate for busts they may in the future decide to probe deeper into the records of chem companies. Right now they are only interested in the big precursor chemicals and some glassware. This may change as time goes on. And if they expand their scope to include harassment of all then it is incumbent on us to protect ourselves from it.

I know all this sounds cloak-and-dagger, but you have to believe me when I tell you that there is almost no chance in hell that anything a home experimenter buys is going to attract one iota of attention. Just because a

certain home experimenter has a certain research topic going through her fevered brain doesn't mean that the rest of the world is sensing the same thing. They aren't! The chemical companies are desperate to sell you whatever you wish. They are not monitoring you. They are not reporting you. They only keep records to protect themselves from the DEA in case the DEA wants to pay them a visit and raid their files. That is their way of protecting themselves. Your way of protecting yourself can be, if desired, by fronting a fake company.

The following is a testimonial by someone-who-is-not-me on how their strategies for receiving chemicals evolved:

Yo! Let me tell ya how I started ordering chemicals and shit.

#### 1. A Friend's House

I started off scared and dumb (still dumb, not scared). But I reasoned with myself, and rightly so, that 2 or 3 purchases of regular glassware and chemicals sent to any address was hardly a reason to warrant suspicions. So I figured that a few purchases sent to a couple of different friends' residences wouldn't jeopardize them. And that's just how I started out. Ya wanna know something... I was pretty much right (as far as I yet know)!

It was no big thing. Called up the chem company, ordered my stuff and gave them a fake company name and the apartment address of a friend. Also did the same thing using the address of a friend that lived in a house. Lo and behold, my stuff was delivered and that was the end of it. Those friends have lived happily ever after.

There are a couple of pointers to remember about using a friend's address for deliveries. First, if your friend lives in an apartment DON'T give the address as being "Apt. #XXX." Yeesh! What kind of laboratory business exists in an apartment?! Give the address as "Suite #XXX" or just "#XXX." It smacks of being more businesslike. Second, you better coach

your friend on what to say if the chem company decides to telephone to confirm an order or just to say "hi." Because the telephone number you give with your order is going to be the one of your friend's (although sometimes you can use your own or a pager so that you can do the talkin'), they need to have a little education. Third, make sure your friend is gonna be at her residence during the 1-2-day window that you expect your stuff to arrive. All this junk is going to be sent by UPS and someone is gonna have to sign for it when it arrives. Nothing looks sloppier than delivering a load of chemicals to an apartment/"business" with no one there to sign for it.

Lastly, if you have a lot of friends willing to help you then you may want to consider splitting up your purchasing needs among multiple addresses. You're gonna find out that it is no sweat getting a chem company to send stuff to any location. But if your last inbred fear is that what you're ordering may be suspicious, then diluting it down through multiple shipments will kill your worries completely.

Think about it. There are millions of purchases just like yours every fucking day. Among those millions, a snoopy DEA guy has to hopelessly filter out suspicious orders. Stuff like bulk purchases, precursor and conversion chemical combos, etc. It just ain't happenin', folks. And as a home researcher, your purchase amounts are gonna be well below the threshold of suspicion. This is not to forget that one isn't even buying anything suspicious in the first place. Yeesh! BUT, if you still have your doubts then split your shipments. How in the world can anyone justify initiating a probe or blowing DEA resources on a single shipment of NaOH and sulfuric acid, or formic acid and a separatory funnel? And I don't want anyone writing to me saying that they HAVE heard of such a thing. Bullshit! Get outta my face with that bullshit!

The testimonial continues. . .

I'm telling you from years of observation that multiple sends are overkill. Yet it is the safest way I can think of. It is also the biggest logistical nightmare to coordinate. Not only do you have to acquire and oversee lots of addresses, but you also have to go and make just as many orders from an equal number of chem companies. That's a tough one, but it's the only way to make it work. As for myself, just working with one or two remote addresses was making me nuts. As the days, weeks and months rolled by with no hassles, busts or paramilitary strikes occurring at my friends' humble abodes, the reality of ordering regular, unwatched science stuff began to hit home. Literally! I switched to Plan #2.

## 2. Ordering to Your Own House

I once read a brilliant little book in which some person may have said that no one should order chems and stuff to their own house or the place in which they experiment. Well... tee hee... that isn't necessarily true. I could see the author's dilemma in that she didn't want to give anyone the impression that it was the way to go. Because sooner or later one person is gonna have a bad experience with it and she'd get blamed. I'm fairly certain that it is generally safer NOT to deliver to your own house. But I decided to do it anyway and have had no problems for years.

It's just too nice to run things from one's own home. You can use the phone. You can receive calls. You don't have to drive all over creation to pick up your stuff. I've never been happier.

I have built a couple of comfortable relationships with two chem dealers (one who is strictly a Fisher rep, and one is a general indy lab store). I get stuff from them all the time. One knows me only by my real name and knows that I am just a single, independent researcher. The other knows me by a fake business name. Both send to my home address.

I get everything I need from them: equipment, glassware, reagents and fine chemicals. Why should I worry and why should they care? The only things I buy from them are every goddam thing on the planet except the 27 chemicals in the DEA List I & II. If I ever have need of some special chemical

that I even remotely suspect as being under any scrutiny; I will simply call up some other chem place for it. I may have that particular chemical shipped to my house or a friend's. Depends on what mood I'm in. It's just a little system I have to keep certain chemicals detached from any others I may have purchased in the past from my regular suppliers. We can't be causing any conspiracies now can we? Whatever those are!

I hear what you're sayin'! And, yes, maybe I am due to get busted. Maybe not. Or maybe I am demonstrating to you how little there may be to fear about legal science purchases in this country. I've been doing home delivery at this same address for two years, three months and counting. I really . . . excuse me, someone's at the door. . .

#### 3. Mail Box Stores

One of the neatest ways I have recently found for safe delivery is one of those mail box stores. You know what I'm talking about. Those little store fronts in strip shopping centers that have mail boxes you can rent. People rent these mailboxes for the very reason of anonymity. And the guys that run these places know it. All you do is give them some money to rent one of their boxes. They don't require I.D. Even if, for formality's sake, they ask for your name or address, just give 'em a fake one. It's really not their business to know and they really don't care.

That little mail box you rent from them is a real mailing address. You can make it your home address or a fake business address. You can rent the box for a week, month or year. I have 5 of them. For weird purchases I open one up for a week, get my stuff and never return.

Remember one thing, these are not P.O. boxes. P.O.'s are post office boxes that you find and rent down at any United States Post Office. P.O. boxes are different from private mail box centers in two very important ways: (1) a P.O. box will require some real I.D. and is too connected to the government for my tastes, (2) there is no one at a U.S. Post

Office that will sign off on a UPS shipment (ergo, UPS won't ship to a P.O. box.)

UPS, and every other package shipper, requires a real person to sign the receiving slip so that there is proof that the package was delivered to its destination. There is no one to do this at the post office. But at each and every mail box center is a clerk to sign of for you. When you come in they will say, "Package for you, ma'am!" Chemicals are no problem. Seen it. Done it. It's just another box to these saviors of the home researcher.

Wow! What a testimonial on shipping destinations. That chick really knows her shit. Well, I hope this will give you an idea of some of the options you have. Feel free to use any and all of them. Or any of your own choosing.

#### ORDERING

Yikes! The day has come. Ordering day! You know what it is that you want to order. You may or may not have a catalog. You've got an address to send things to. If you've read my book then you're either scared or pumped or both. If not then you're probably under some sort of duress because this is a big occurrence. Why else would some idiot (me) write an entire book geared solely towards this one defining moment? (Why did you buy this book is the bigger question.) I can feel the tension even now!

## [LONG PAUSE]

Oh please! Give me a break! I've got news for you. This is gonna be a big disappointment. There is no trick to doing this at all. I've said before and I'll say it again: "Just call them up and order your shit!"

These lab stores and chemical manufacturers are just like any other businesses. They just want to sell you stuff and they want to do so very badly. They have fierce competition to deal with as all the addresses I list will prove. And just as I have said, the majority of the businesses I list in

this book are those that will sell to anyone. You do not have to ask the all imposing question: "Uh. . . do you sell to individuals?" I have already done this for you.

But just because you can start ordering from these companies right off the bat doesn't mean you can be a bonehead about it. These companies are not entirely stupid and realize that they sell some very serious stuff. If they don't feel at ease with you then they will refuse to sell to you. Because I've been pretty successful at doing all of this I figure I'll just run down how things have played out for me when dealing with companies that are *not* very interested in selling to individuals.

First things first. I don't care if you are an individual or a business, or if you are calling a company that doesn't care if you are an individual or a business. When you call up that company you are going to identify yourself as a business. I don't care what kind of business it is. Just do it. By simply doing this you have eliminated 92% of your problems and suspicion.

I'd say I had to exclude well over 300 businesses from this book simply because they would not sell to individuals. Of these 300, I would say that nearly 80% would sell to you simply by hearing from you that you were in fact a business. It's not that they don't like you, it's just that their insurance policy won't allow it.

Simply telling any company you are a business puts them at ease and into a mood to sell! Yes, I have encountered lab companies that want proof and credit references. They do this not because they are suspicious and want to turn you in; they do this because, in general, they are used to dealing with larger clients and want to make sure you have the financial firepower to make the kind of purchases they like. When I come across places like these I just simply refuse to do business with them and go elsewhere.

Don't fret if the first thing a chem company sales rep asks you is, "What company are you with?" Just tell 'em! And tell 'em with confidence. Be

chatty and friendly:

"Ingen Environmental. You know? Just like in Jurassic Park. Oh, ha ha! Have I got stories to tell!"

Don't be surprised if the next thing they ask is what your company does. Again, just tell 'em. Be colorful in your description. Drop some names. Be creative. And be prepared to offer a little knowledge about the things your company does:

"We manufacture the eyeball components for Beanie Babies. . ."

"We combine ceramic insulators for superconductors. You know Silicon Graphics? They just integrated one of our products."

"Would you be interested in one of our brochures?"

There's not much else to say about this, folks. Either they're gonna sell to you or they won't. At this point I'll guarantee they are ready to sell. But there's no rush to all this. And even a business is subject to suspicion if all they order are squirrelly things right off the bat. Set yourself up as a good, paying customer by ordering non-chemical items first. Almost any place that doesn't sell chemicals to the public will sell everything else to them. You should take note of this for what it means. Everyone is comfortable with selling non-chemical science stuff. And if you start off your relationship with a chem company by only buying the non-threatening items, then you're setting yourself up as a regular customer who can buy what she wishes later on. It works!

Gauge the chem company's willingness to sell you chemicals by ordering or inquiring about totally harmless chemicals or really strange ones. A lot of chem companies that I talked to, and who did not sell chems to individuals, began to soften on their stance when they found that all I wanted was some tungsten oxide or cobalt sulfate. I chose to inquire about these

for my research for this book because they are about as foreign to drug use as I could think of. And wouldn't you know it, they lifted their policy for me. Had I actually gone ahead and bought my cobalt, I'd bet ya they wouldn't have minded a second order another day.

Sometimes, to prove the professionalism and particularness of my fictitious company, I would specify my desire for serious forms of common reagents and solvents.

Me: "Hello, this is 'me' from Bumble Bee Synthetics. We [always refer to yourself as "we." You *are* a company of more than one person, remember?] need to order some ethyl ether."

**Rep:** "Uh. . . I don't show you as having an account with us and we don't normally sell ether because of the restrictions on it."

Me: "Oh, I understand. But what I need is a little beyond normal ether. We are doing method development on a 7 Tesla Mass Spec and we need to do a comparison of the highest purity ethers offered by Fisher, Baxter and J. W. Baker. Fisher's ultra purity line goes by the name Optima, Baxter's is called 'GC Squared' and Baker's is called Ultra Resianalyzed. The one with the least trace contaminants will get the bid. Can you coordinate this for us as we do not have the inclination to set up 3 separate accounts with these companies just for this project."

That's a triple whammy example.

- (a) It shows you know your shit.
- (b) It gives the chem company a novel little challenge to see what the hell you are talking about and see if they can meet your request.
- (c) You're asking them to be your company's savior on this project. The natural mothering instinct of the chem company will come shining through.

The toughest companies are those that won't sell to individuals and won't sell to businesses unless they get credentials first. These are serious players and are a favorite challenge of mine. If I call one of these boys up and find out about their negative capitalistic policies, I'll immediately switch the conversation to this:

"Gee, that's unfortunate. The fact is we need 20 liters of formamide to replace the unacceptable lot we got from 'Rival Scientific Company'. We need this in two days or we may lose the contract. We also need some tungsten and cobalt but not as quickly as the formamide. Can we at least contract to have the formamide sent immediately and keep shipment pending on the tungsten and cobalt until our credit check is passed?"

I'm tellin' ya. This little scheme works about 70-80% of the time for me. In today's world, businesses understand and try to meet the necessities of next-day business. Credit checks can take anywhere from 2-7 days. They want your business badly and will react to urgent requests. It is a window through which one can order a one-time mega purchase to an address that may or may not remain in existence after shipment. You need to have balls (figuratively) to pull it off, but it is a way to get even the most incalcitrant place to deliver the goods.

## QUICK TIPS

I can rattle on forever about all the tricks and methods one could try but I guess you pretty much get the picture by now. So let's finish of with a few quick tips to remember.

(1) Remember, if a manufacturer or company won't sell to you then request some names and numbers of places that will. This info they will be happy to supply because they will, in a limited sense, feel sorry that they weren't able to help you themselves. Believe me, almost every chemical will eventually find it's way to a consumer/retail level. So follow that trail until you puke!

- (2) If ya really want to show professionalism ask for the C of A (certificate of analysis) as well as the MSDS data sheet for a particular chemical you are buying. The C of A is the lot analysis of the chemical and only the manufacturer will have it. The lab store won't know what the hell you are talking about. But it will impress and confuse them.
- (3) FAX in those orders! Lab companies drop a lot of their skepticism when one asks if it is OK if they FAX in their orders or give FAX numbers for the lab store to send a quote to.
- (4) Always drop as many names as possible. Competitors, products, industry leaders etc.
- (5) Whenever possible, demand overnight shipment. It shows professionalism and assures that a package will be long gone from the point of delivery before any nosy people can catch up.
- (6) For godsake, stop using the pathetic and useless "I'm a college chem student doing a project for school" excuse! It doesn't work and is just plain dumb!
  - (7) Threaten them with bodily harm!
- (8) Always laugh and be pleasant. And when your order arrives, call up the company and thank them. Jeezus, this is so simple!

# The Most Important Chapter in This Book

Before you folks turn the page to "sources heaven," you had better read this chapter first. As illustrated by this book, you can see that buying chemicals is not as open as it once used to be. And things are gonna get more restricted as time goes by. Many forces are at work to keep the citizenry from owning chemicals. Forces that may surprise you.

Why are chemical companies and lab supply companies bailing out of the retail market? The overwhelming and predominant reason is that they fear the liability of selling to non-business entities. All you lawsuit-happy people have literally forced the hand of the industry. The only reason they sell to businesses is because a business automatically assumes the liability over the chemical. If they sell to an individual, then they can be held liable if the individual eats the chemical or some such shit.

It puzzled me that chem companies have all these disclaimers in their stores, on their Internet sites and on their bills of sales, yet can still be held liable for misuse. I asked a few companies how that could be and they say that that is just the way things are. "Even if you get the customer to flat out sign a waiver or something?" I would ask. Yup, they are still liable. Crazy, man!

Now, it isn't just greedy, lowlife citizens that are causing the liability scare. It is also (ta da!) the DEA at work. Not directly, mind you. But in

a sneaky little subversive-kind-of way. I have it on good faith that the DEA has been using the Department of Transportation (DOT) to do a little strong arming on the chem suppliers. Let me explain. . . .

Most chem companies, up til very recently, sold to everybody. Even though civil liabilities were as prominent then as they are today. So what caused the dramatic shift over the past couple of years? Well, do you remember a little thing called the ValuJet airplane crash? The ValuJet plowed into a Florida swamp because oxygen tanks it was transporting blew up. This caused a dramatic new set of shipping requirements on a lot of chems. It forced a lot of hazardous chems to be relegated to ground shipping instead of air. It also gave the DOT a good excuse to enact a whole slew of regulations including special and expensive package and container specifications, restrictions on the mode of transport etc.

Ok, no big deal. All that does is just make things more expensive to ship. It doesn't change liability or how serious a trouble a chem company can be in if they sell to an individual. Or does it? The DOT's responsibility was to make shipping safer. That's it. That was their mandate. BUT (and this is only what I heard from a few lab companies) apparently the DEA got into bed with the DOT and got them to use this opportunity to hammer the lab companies. I have heard that the DOT may have overstepped its authority and had the liabilities and/or civil and criminal penalties raised on sales to individuals. Again this is just a rumor, but it seems a reasonable tactic for the DEA to get done what they could not do alone.

And since we are on the subject of new shipping rules, we now progress to the #2 reason why lab stores have given up. The new DOT transportation rules for chemicals are crushing. Almost every chemical known has been redesignated as hazardous. New shipping regulations have been implemented to deal with all this new "hazard." Cardboard boxes for shipping must meet new DOT guidelines. The corrugation must be so wide. Reinforcement of the walls must be exact. Some boxes must have liners. Some must have poison packs. Some chems must be packaged in multiple containers. These containers now cost the chem companies over \$10 each whereas their previous packages used to cost them pennies.

The new regulations regarding transport are even worse. Many chemicals cannot be shipped by air even though they used to be. Many chemicals cannot be shipped in the presence of others even if they are on opposite ends of the plane or truck (knowing which combinations apply is mind numbing). New no-hazard zones have been put in place in communities across the nation so that trucks carrying chems must reroute themselves to avoid the off-limit freeways (no one shipper knows where all these zones are). Each hazardous chemical that is shipped is charged an automatic \$13 haz charge (unless one can fit the two or more haz chems into one box then there is only one \$13 charge. But first, one must be sure of the regulations of whether the haz chems can be shipped together in that same box. Confused yet?)

This had made things so confusing and expensive that UPS has stopped shipping all hazardous chemicals! Fed Ex and others will follow. This mean hazardous chems (such as sulfuric acid and isopropyl alcohol) will have to be shipped on interstate trucking. The minimum charges for a simple bottle of iPrOH shipped this way is over \$100. Yikes!

And who has the job of coordinating this bureaucratic morass? That's right! The poor little chem company. It has literally driven many of them out of business. And those that remain are very unhappy and despondent. That's your government at work for ya, folks! But it isn't just the U.S. government that is involved. Ever hear of the ISO 9000. Well, that is a new set of chemical shipping and handling regulations that are imposed on the globe by the United Nations. It is just like the DOT regulations except it comes from the UN. Oh baby, have I heard it from a lot of US lab companies that are pissed off because the UN (a group of foreigners) is dictating internal U.S. chemical shipping policy.

Just when you think it couldn't get any worse for our chem supply friends, in comes the DEA. Believe me when I tell you that DEA pressure is the least of the reasons why the majority of chem companies withhold sales from individuals. But for some places it is. As you can see from the **Watchmen** section, the DEA has been intruding on private businesses for many years.

And in the same section you can see the civil and criminal threats the DEA has been escalating on the chem stores. Some places have just given up under this pressure. And believe me, these people did not choose to limit their profits and shut down sales to individuals just because the DEA asks them to. They do it because they are in fear of the DEA. Again, your government at work for you.

And now we get to the point of why this chapter is the most important one in the book. In the pages to follow you are gonna find the names of companies that, in the face all this burden, have elected to still sell to all you ungrateful swine. DON'T BLOW IT!!!

Do not ever abuse these companies! Do not make drugs or explosives using the chemicals you buy from them. Do not ever try to buy List chemicals from them (they won't even sell them to you so don't ask!). Always pay your bills to them. Always be polite. If you are too stupid to do chemistry and hurt yourself with a chemical, then try to grasp the concept that it was your own fault. Don't sue the chemical company. Be a man (or whatever) and accept responsibility.

And even though you are doing legal chemistry, you need to protect yourself and the chem company from DEA. If the DEA pays you a visit and decides they don't like what you are doing, then they will make it hard on you AND hard on the chem company for selling you stuff. So give the chem company a break and destroy all receipts, packaging and documentation that leads to the chem company. Scrape off all the lot numbers on the labels of the chemicals so they can't be traced. And keep your mouth shut. Just because you got screwed doesn't mean that the chem company and, ostensibly, all its individual customers must suffer the same. Because they will. Fair enough?

# The Big Science Houses

These are the companies from whence all science flows. They are the mammoth distributors and manufacturers of the industry. Many manufacture and sell their own chemicals and merchandise. But most of these are nothing more than big distribution businesses that combine products from many sources and sell them via catalogue to scientists.

I used to be very adamant about not buying from these companies because they almost always prohibited selling their products to individuals (read that "citizens" or "consumers"). This is still, for the most part, true. But in the quest for this book I found some surprising sources that have absolutely blown me over. Oh baby, are we gonna have some fun!

For those companies that do sell to people and for those that do not, I have tracked down almost every little indy store in the nation that distributes for them. A good sampling of them is in the **Laboratory Supply** chapters. So order from the big guys here or order from their distributors. You can't lose!

#### **Fisher Scientific**

(World Headquarters) 711 Forbes Avenue Pittsburgh, PA 15219-4785

TEL: 1-412-562-8300 FAX: 1-800-926-1166 TOLL FREE: 1-800-766-7000 ■ Comments: Oh boy, Here

■ Comments: Oh boy. Here we are, folks. Possibly the best source in the book. And here's why. . . Fisher is the biggest sci-

ence house in the world. And until last year it was inaccessible to the public. In an industry that secludes itself more and more from the public due to intimidation by the DEA, it seemed reasonable to me that companies like Fisher would become more and more exclusive.

But Fisher retaliated! It bucked the trend and opened up its entire catalogue (everything EXCEPT glassware and chemicals) to the public. Unprecedented! If you have never seen a Fisher catalogue then you don't know what I'm talking about. Every conceivable piece of scienceware is now completely accessible to the public. A fully functional lab is but a phone call away.

Do yourself a favor and call Fisher first. I urge everyone to support Fisher in this bold move by buying as much stuff from them as possible. This will show their tightass rivals (esp. VWR) that sales to the public make devastating financial sense.

#### MSC

151 Sunnyside Boulevard Plainview, NY 11803-9915 TOLL FREE: 1-800-645-7270 URL: www.mscdirect.com

■ Comments: Hot tip #2. Ever heard of a company called "Grainger?" Well, they are a national company that sells every conceivable tool, machine, industrial material, electrical thingy and stuff. Just one problem: they only sell to businesses. Well, MSC said what about the rest of the citizenry and opened up an even bigger inventory for direct public sales. This enormous catalogue has everything (including all sorts of vacuum pumps). It is not a science business but rather an industrial supply company. Monster selection. Low, low prices and guaranteed next day delivery on all orders. Fantastic source.

#### Aldrich Chemical Company Inc.

1101 West St. Paul Avenue Milwaukee, WI 53233 TEL: 414-273-3850 FAX: 414-273-5793

■ Comments: Biggest supplier and manufacturer of chemicals in the world. Includes the subsidiary chemical companies Sigma and Fluka. Absolutely inaccessible by most indi-

viduals and, in fact, many small companies. If you want to try to get stuff from them then by all means try. All I have to say is, "Good luck, bro'!"

#### Alfa/ Aesar

30 Bond Street

Ward Hill, MA 01835-8099

TEL: 508-521-6300 FAX: 508-521-6350

■ Comments: Precious metals, metal catalysts and reagent chemicals. Trust me, they don't like you.

#### All-Chemie Ltd.

501-D LaMesa Road Mt. Pleasant, SC 29464 TEL: 803-884-4400 FAX: 803-884-0560

■ Comments: I like this company. Very nice lineup of metal, halogen, and rare earth compounds. The people running this are really open. Approach this place as an avid photographer or metal worker and you will do just fine.

#### Alltech

2051 Waukegan Road Deerfield, IL 60015 TEL: 708-948-8600

TOLL FREE: 1-800-255-8324

Comments: Another giant, allinclusive company like Fisher and
VWR.

## American International Chemical Inc.

17 Strathmore Rd. Natick, MA 01760 TEL: 508-655-0927 FAX: 508-655-0927

TOLL FREE: 1-800-238-0001

■ Comments: Bulk organic, pharmaceutical & fine chemicals. Just make an order, send a money order and no

problem.

## **Angus Chemical Company**

1500 East Lake Cook Road Buffalo Grove, IL 60089 TEL: 847-215-8600

FAX: 847-215-8626

TOLL FREE: 1-800-362-2580 ■ Comments: Good source of the nitroparafins such as nitromethane, nitroethane, and nitropropane.

#### J.T. Baker

(A Division of Mallinckrodt Baker, Inc.)

222 Red School Lane Phillipsburg, NJ 08865 TEL: 908-859-2151 FAX: 908-859-9318

TOLL FREE: 1-800-582-2537

URL: www.jtbaker.com

■ Comments: This place and Mallinckrodt are essentially the same companies but their respective catalogues are a little different. Both have full line chem reagents. You can only get their products through the indies.

#### **Biorad**

2000 Alfred Nobel Drive Hercules, CA 94547 TEL: 510-741-1000 FAX: 510-741-5800

TOLL FREE: 1-800-424-6723

■ Comments: Will sell to anyone. No wonder, because all the sell is biological assay equipment. However, they do retain a small lineup of nice regent chemicals. Mostly salts and solutions.

#### **Charkit Chemical Corporation**

330 Post Road Darien, CT 06820 TEL: 203-655-3400 FAX: 203-655-8643

■ Comments: A very diversified chemical company with distinct product lines for such things as photography, electroplating and everything else. They are surprisingly approachable. Proposition them directly for sales or ask for a distributor.

#### Cole-Parmer

7425 North Oak Park Avenue

Niles, IL 60714 TEL: 708-647-7600 FAX: 708-647-9660

TOLL FREE: 1-800-323-4340
■ Comments: A great source. Sells every conceivable lab gadget and piece of equipment. Doesn't sell any chems or glassware. Very open to the public. Their selection is more extensive than any other catalogue I know of.

#### **GFS Chemical**

P.O. Box 245

Powell, OH 43065-0245 TEL: 614-881-5501 FAX: 614-881-5989

TOLL FREE: 1-800-858-9682

■ Comments: Nice lineup of laboratory chemicals and organics. Takes Visa/MC. Very accessible to the public.

#### **Hawkins Chemical Inc.**

3100 E. Hennepin Avenue Minneapolis, MN 55413 TOLL FREE: 1-800-328-5460 URL: www.hawkinschemical.com

# Indofine Chemical Company, Inc.

P.O. Box 473

Somerville, New Jersey 08876

TEL: 908-359-6778 FAX: 908-359-1179

■ Comments: A huge company with tons of organics. Nearly rivals Aldrich in comprehensiveness. They accept credit cards but are a little incalcitrant.

#### Jarchem Industries, Inc.

414 Wilson Avenue Newark, NJ 07105 TEL: 201-344-0600 FAX: 201-344-5743

■ Comments: Nice lineup of spe-

cialty chems and salts.

#### JLM Industries

8675 Hidden River Parkway

Tampa, FL 33637 TEL: 813-632-3300 FAX: 813-632-3301

■ Comments: Only sell solvents. Very easy to order from. Good place to get only solvents while getting other

things elsewhere.

Kelco (A Division of Merck & Co.) 8355 Aero Drive

San Diego, CA 92123

TEL: 619-569-4900 or 619-569-3436 ■ Comments: Aromatic and flavoring

subsidiary of Merck.

#### Pfaltz & Bauer Inc.

172 East Aurora Street Waterbury, CT 06708 TEL: 203-574-0075 FAX: 203-574-3181

■ Comments: Very friendly company. Offers full line of laboratory chemicals, aromatics and some essential oils. Is, at times, very accessible to the public.

#### Ricca Chemical

448 West Fork Drive P.O. Box 13090 Arlington, TX 76094 TEL: 817-461-5601

TOLL FREE: 1-888-467-4222 ■ Comments: Only sells reagent solutions. But there are a lot to chose from. A sneaky way to get chemicals is in the innocuous form of solutions.

Very informative catalogue.

#### Ruger Chemical Co., Inc. P.O. Box 806

Hillside, NJ 07205 TEL: 201-926-0331 FAX: 201-926-4921

TOLL FREE: 1-800-274-7843 ■ Comments: Nice lineup of most

chemicals. Very easy to order from.

## Sargent Welch

P.O. Box 5229

Buffalo Grove, IL 60089 TEL: 847-635-7330 FAX: 847-635-1177

## **Spectrum Chemical** Manufacturing Corp.

755 Jersev Ave.

New Brunswick, NJ 08901 OR: 14422 S. San Pedro St. Gardena, CA 90248

TEL: 310-516-8000 FAX: 310-516-7512

TOLL FREE: 1-800-772-8786 ■ Comments: Very big company. Very, very extensive list of laboratory chemicals, catalysts etc. Don't order from them directly. They prefer you get their products from indies. Well, it was kind of funny because I was able to secure an exclusive list of the salesto-individuals policies of their distributors from a very friendly operator in Spectrum's customer service department. Guess he kinda liked me. So now you can go to the "A" list of indy suppliers for the real goods.

#### Strem Chemicals, Inc.

7 Mulliken Way Dexter Industrial Park Newburyport, MA 01950-4098

TEL: 978-462-3191 FAX: 978-465-3104

TOLL FREE: 1-800-647-8736 ■ Comments: I was stunned. This place has a nice lineup of rare earth catalysts and reagent chemicals, very low prices and they really do take orders from individuals.

#### **Thomas Scientific**

99 Hill Road

Swedesboro, NJ 08085-0099

TEL: 609-467-2000 FAX: 1-800-345-2100

■ Comments: A big distributor just

like Fisher and VWR.

#### Whatman LabSales

P.O. Box 1359

Hillsboro, OR 97123-9981

FAX: 503-648-8118

TOLL FREE: 1-800-942-8626 URL: www.whatman.com/labsales ■ Comments: Completely open to the public. And for the very reasons I

like. No chemicals for sale. The catalogue is just a who's who of laboratory wares. Vacuum pumps, scales, hot plates, stirrers, lots of plasticware and much, much more! Great prices. Easy ordering by phone or on the internet. May have used them myself once or

twice. Highly recommended!

Look, folks. This one list, out of all the others in this book, has the potential to be too huge for me to make. There are thousands upon thousands of origin source manufacturers. Many specializing in just a small range of chemicals. Those that do are good targets because their product ranges are too narrow to be of any consequence to the DEA. They are often very accessible but ya got to know what chems it is you want before you go looking. The range of necessary chemicals for private research is too vast for me to narrow down all these manufacturers in a cohesive list for you. However, I will, in the future, pursue such an endeavor. Right now I'm sick to death with all that I am compiling already. Yeesh!

# Laboratory Supply Companies

The list some of you have waited for. The list some of you have dreaded. And here it is. Almost every local lab store in the nation that sells to the public. I have prescreened every single one of these companies. They exercise their legal rights to sell legal chemicals and science products to the citizenry. Almost without exception, all these little indy stores distribute for all of the major science houses such as VWR, Fisher, Baxter, Mallinckrodt etc. You don't need to be a business. You don't need any excuses. And all will sell to you. Don't blow it!

#### ALABAMA

#### AWC

Mobile, AL 36613 TEL: 334-456-8484

1911 Bear Fork Road

FAX: 334-457-5839 TOLL FREE: 1-888-615-7575

■ Comments: V/MC accepted. No minimum orders. Ask for Steve

## General Laboratory Supply Inc.

1771-A 5th Street Mobile, AL 36615 TEL: 334-694-6941

#### ALASKA

#### Alaska Scientific Inc.

664 East Dowling Road Anchorage, AK 99503 TEL: 907-561-8330

FAX: 907-563-2758

#### ARIZONA

#### **ADC Products**

3675 East 44th Street Tuscon, AZ 85713 TEL: 520-790-8485 FAX: 520-790-8488

■ Comments: Walk-ins only. Need ID and must be over 21. Only sells Spectrum Chemicals. Ask for the very grumpy "Sarge." V/MC, \$25 min. order.

#### Alameda Chemical & Scientific

922 East Southern Pacific Drive Phoenix, AZ 85034

TEL: 602-256-7044

■ Comments: V/MC, \$50 minimum order. Ask for Jim.

## **Chemical Laboratory Supply**

2810 South 24th Street Phoenix, AZ 85034 TEL: 602-220-9011 FAX: 602-244-0522

■ Comments: V/MC, no min., order.

Ask for Eric.

#### S R Science

2750 South 4th Avenue #101

Tuscon, AZ 85713 TEL: 520-622-4087 FAX: 520-622-4694

■ Comments: Sells Spectrum. Sounds like a lets-make-a-deal kind of guy.

#### Universal Scientific of Arizona

320 South El Dorado #1

Mesa, AZ 85202 TEL: 602-966-2780 FAX: 602-966-3601

■ Comments: Has a lot of chemicals

in stock.

#### CALIFORNIA

## **AI-Chymist**

17130 Mesa Street Hesperia, CA 92345 TEL: 760-948-4150 FAX: 760-948-1644

■ Comments: A couple of really cool, friendly dudes. Sounds like they have

a lot in stock.

#### All Discount Lab Supply

2394 American Avenue Hayward, CA 94545 TEL: 510-264-1983

FAX: 510-783-7108 URL: www.chemicalsrus.com

■ Comments: Chems, glassware and everything. Reps GFS Chemicals, Fisher and Alfa Aesar. Was very eager to sell. A little too eager for my tastes.

#### Amico Scientific Corporation

7231 Garden Grove Boulevard #A

Garden Grove, CA 92841

TEL: 714-894-6633 FAX: 714-898-8694

■ Comments: V/MC, \$15 min. order.

Ask for Janet.

## **Amico Scientific Corporation**

1161 Cushman Avenue San Diego, CA 92110 TEL: 619-543-9200

## Aremco Scientific Company

16148 Wyandotte Street Van Nuys, CA 91406 TEL: 818-785-1038

■ Comments: A little wary but does

sell to folks.

#### **Argo Chemical**

100 Quantico Avenue Bakersfield, CA 93307 TEL: 805-322-2222 FAX: 805-322-2303

■ Comments: Mostly sells large amounts. Takes V/MC and has a \$50

min. purchase policy.

#### **Atlas Chemical**

P.O. Box 2322

San Diego, CA 92112 TEL: 619-232-7391 FAX: 619-232-6129

■ Comments: V/MC, \$50 min. order.

Ask for Corky.

#### Barrow, Thomas P.

10554 Progress Way #K Cypress, CA 90630 TEL: 714-995-8730

■ Comments: Sells mostly biomedical stuff, but has access to biorad and

EM reagents.

## **Bryant Laboratory Inc.**

1101 5th Street Berkley, CA 94710 TEL: 510-526-3141 FAX: 510-528-2948

■ Comments: Possibly the safest and most honest lab store in the nation. Highly recommended. Being in the center of the hotbed of hippies and naughty chemists (Berkeley) has made them very aware. And they know exactly what is up. I have had many conversations with this company but the first was the most memorable. I ask "Do you sell chemicals?" And the lady says matter-of-factly (as if she has been asked this a million times) "Yeah but we ain't gonna sell you anything restricted or suspicious so don't even try". No Ma'am! Refreshing honesty. The company in fact is geared towards hobbyists and is very customer oriented.

## Chem-Lab Supplies

1060 Ortega Way #C Placentia, CA 92870 TEL: 714-630-7902 FAX: 714-630-3553

■ Comments: V/MC, no min. order.

Ask for Mark.

## Chem-Lab Supplies

13814 Inglewood Avenue Hawthorne, CA 90250 TEL: 310-973-2391

## Chemicals for Research & Industry Inc.

2928 Poplar Street Emeryville, CA 94608 TEL: 510-893-8257 FAX: 510-893-0746

■ Comments: V/MC, no min. order.

Ask for Doug.

# Clarkson Laboratory & Supply Inc.

350 Trousdale Drive Chula Vista, CA 91910 TEL: 619-425-1932 FAX: 619-425-7917

■ Comments: V/MC, no min. order. Ask for Olita or Danni. They also welcome you to ask about their logo which is a dragon eating its own tail.

So do so!

#### **Coast Scientific**

6310 Nancy Ridge Drive San Diego, CA 92121 TEL: 619-450-0999

FAX: 619-450-1157

TOLL FREE: 1-800-445-1544

■ Comments: Very friendly company. Very open to individuals. Has a nice catalogue which is like a mini version of bigger places like Fisher and Baxter. Nice inoffensively small yet very useful chem selection. But can get anything from Spectrum Chemical as they too are a distributor for them.

#### **Columbia Diagnostics**

6336 Petterson Pass Road #F

Livermore, CA 94550 TEL: 510-455-1674 FAX: 510-455-1698

■ Comments: Accepts COD orders.

Mostly medical supplies but will order

EM chemicals.

#### **Dixco Chemical**

847 South East Street Anaheim, CA 92805 TEL: 714-535-0646 FAX: 714-533-9856

■ Comments: No credit cards accepted, \$25 min. order. Ask for Mike.

#### **Eagle Scientific Products**

4226 40th Street San Diego, CA 92105 TEL: 619-563-9554

■ Comments: General lab supplies and chems. Sells to anyone overseas which seems to be their predominant business. Will send to U.K. and Australia. Needs a little talking to to sell to people in the U.S.

#### Gallade Chemical Inc.

425 North Andreasen Drive Escondido, CA 92029

TEL: 760-489-0798 FAX: 760-489-0297

■ Comments: V/MC, no min. order.

Ask for Rick.

#### **General Laboratory Supply**

468 Constitution Avenue Camarillo, CA 93012 TEL: 805-389-5400 FAX: 805-389-5402

■ Comments: Part of a loose confederation of other stores with the same name. A distributor with no showroom. Sells Spectrum, Mal/Baker. "Will sell anything but DEA List chemicals," says the owner. Accepts money orders and CODs.

## San Jose Scientific Shop Company

148 Archer Street San Jose, CA 95112 TEL: 408-453-5094 FAX: 408-453-5691

■ Comments: Full line distributor. Very friendly. Was one of the people who explained the CA \$100 law. He said that for walkup or mail of \$100 that he needs to write down your address, name and driver's license ID#. He says that all he does is store this info for possible inspection later. Says that the info is not checked to authorize the immediate sale.

#### SHE Inc.

1679 Novato Boulevard

Novato, CA 94947 TEL: 415-898-1409 FAX: 415-898-1479

Comments: VWR, Fisher. Pleasant

stoner-sounding dude.

## **Sierra Chemical Company**

788 Northport Drive

West Sacramento, CA 95691

TEL: 916-371-5943 FAX: 916-371-3363

■ Comments: V/MC, no min. order.

#### **Tri-Ess Sciences**

1020 W. Chestnut Burbank, CA 91506 TEL: 818-843-7838 FAX: 818-843-3521

■ Comments: V/MC, \$20 min. order.

Ask for Polly.

#### **Witeg Scientific**

14235 Commerce Drive Garden Grove, CA 92843 TEL: 714-265-1855

■ Comments: Very nice and genuine sounding owner. Distributes for all

companies.

## COLORADO

## Scientific Supply Source Inc.

15201 East Moncrieff Place Aurora, CO 80011

TEL: 303-375-1664 FAX: 303-375-1706

#### Colorado Scientific

900 Broadway Denver, CO 80203 TEL: 303-777-3777

■ Comments: V/MC, no min. order.

Ask for Bridget.

#### FLORIDA

#### **All World Scientific**

350 Scarlet Boulevard Oldsmar, FL 34677

TEL: 813-854-4373

■ Comments: Distributes for every major chem company. Says "Will sell everything except 'certain chemicals'" V/MC, no min. order. Ask for Trish.

#### **Biscayne Chemical**

1215 Northwest 7th Avenue Miami, FL 33136

TEL: 305-324-1133 FAX: 305-324-0354

■ Comments: Reps all. V/MC, no

min. order. Ask for John.

## **Cambridge Scientific Company**

7162 Northwest 72nd Avenue

Miami, FL 33166 TEL: 305-885-5900 FAX: 305-888-2011

■ Comments: Very nice man but has liability concerns so will only sell chems to businesses and not individuals. Will sell va anything else though.

#### Chem-Index Inc.

7245 Northwest 43rd Street

Miami, FL 33166 TEL: 305-593-9418 FAX: 305-477-4256

■ Comments: Reps all. \$100 min.

order accepts V/MC.

## **Exaxol Chemical Corporation**

14325 60th Street North Clearwater, FL 34620 TEL: 813-524-7732

■ Comments: Manufactures and sells solutions only. Very friendly folks.

## First Coast Industry Supply Company

2950 Saint Augustine Road Jacksonville, FL 32207

TEL: 904-398-7466 FAX: 904-399-5774

■ Comments: Fisher/VWR. Min \$100

order.

#### **Kenin Scientific Discount**

1830 Northeast 163rd Street

Miami, FL 33162 TEL: 305-949-7681 FAX: 305-947-5943

■ Comments: Reps all. No minimum order. Send FAX and they will return FAX with quote or visit their store. Also sells glassware and telescopes.

## **Laboratory Supply Co.**

3069 Mercury Road Jacksonville, FL 32207 TEL: 904-739-9032

TOLL FREE: 1-800-257-8405

#### Labtrade

6157 Northwest 112th Avenue

Miami, FL 33172 TEL: 305-718-8355 FAX: 305-718-8368

■ Comments: \$250 minimum order. Can get anything from any company.

Are "big on exporting"!

## Neopart

7732 S.W. 106th Miami, FL 33156 TEL: 305-663-6631 FAX: 305-667-9539

■ Comments: Nice Middle Easternsounding lady willing to sell. Will export no problem. Most glassware in

stock. Can get Sigma/Aldrich.

#### Sovereign Scientific

2125 Biscayne Boulevard

Miami, FL 33137 TEL: 305-573-2571 FAX: 305-576-5905

■ Comments: Represents all companies but deals in quantity (\$300 min. order). No credit cards except for

walk-ins.

## GEORGIA

#### Infolab Inc.

1500 Cross Street

Fort Oglethorpe, GA 30742

TEL: 706-861-5046 FAX: 706-866-5234

■ Comments: Part of a chain of stores. Definitely sells to the public. Distributes for all companies.

## Lab Depot, Inc.

3510 Trotter Drive Alpharetta, GA 30201 TEL: 770-360-7882 FAX: 770-360-7889

TOLL FREE: 1-800-733-2522 URL: www.labdepotinc.com

## Laboratory Depot Inc.

564 Peachtree Pkwy. Cumming, GA 30131 TEL: 770-844-8087 FAX: 770-844-8703

■ Comments: V/MC, \$50 min. order.

Ask for John.

## Southern Specialty Gases

1025 West Lathrop Avenue Savannah, GA 31401 TEL: 912-234-4441

TEL: 912-234-4441 FAX: 912-236-5526

■ Comments: Sells all things gaseous. But because of shipping liability prefers to sell only to Georgia resi-

dents.

#### HAWAII

#### Chemical Sales & Service Inc.

96-1276 Waihona Street Pearl City, HI 96782 TEL: 808-455-9088

■ Comments: A Fisher rep.

#### **Hawaii Chemical & Scientific**

2363 North King Street Honolulu, HI 96819 TEL: 808-841-4265 FAX: 808-842-1067

■ Comments: V/MC, no min.. order.

Ask for John.

#### IDAHO

## **High Purity Chemical**

212 NW Tenth Street Meriden, ID 83642 TEL: 208-888-9301 FAX: 208-888-6294

■ Comments: V/MC, no min.. order.

## ILLINOIS

#### **LA Pine Scientific Company**

13636 Western Avenue FL 3 Blue Island, IL 60406

TEL: 708-388-4030 FAX: 708-388-4084

#### INDIANA

## **Laboratory Supply Company**

7721 Records Street Indianapolis, IN 46226 TEL: 317-546-6872

TOLL FREE: 1-800-888-1200

#### IOWA

#### Danick Scientific Inc.

1999 Blue Herron Road Northeast

North Liberty, IA 52317 TEL: 319-626-3700

■ Comments: Sells everything BUT

chems to the public.

## Dermatologic Lab

608 13th Avenue Council Bluff, IA 51501 FAX: 712-323-1156

TOLL FREE: 1-800-831-6273

■ Comments: Don't let the name fool you. Theses guys are a full-fledged Spectrum Chemical distributor. And they sell to the public. V/MC, no min. order. Ask for Debra.

## **Laboratory Supply**

6390 Northeast 14th Street Des Moines, IA 50313

TEL: 515-289-1065 FAX: 515-289-1744 1-800-888-2300

■ Comments: Sells everything but

chems.

#### **Midland Scientific**

4616 Kimmel Drive Davenport, IA 52802 TEL: 319-323-1889

FAX: 319-323-0739

■ Comments: V/MC, no min. order.

Ask for Bob.

## KANSAS

#### Science Education Center

125 South Hillside Street Wichita, KS 67211

TEL: 316-682-1921 FAX: 316-682-6404

■ Comments: Sells it all to the public: glassware, chems, whatever.

#### KENTUCKY

## **Laboratory Supply Company**

250 Ottowa Avenue Louisville, KY 40209 TEL: 502-363-3307

FAX: 502-364-1609

TOLL FREE: 1-800-888-1200

#### LOUISIANA

#### Advanced Scientific Inc.

401 Magistrate Street Chalmette, LA 70043 TEL: 504-277-7562

■ Comments: Bulk chems and supplies to the public. NOT affiliated with the Advance Scientific of Florida.

#### AWC

6655 Exchequer Drive Baton Rouge, LA 70809

TEL: 504-752-1100

TOLL FREE: 1-800-364-0292

#### Laboratory Supply Co.

401 East Magistrate Street Chalmette, LA 70043 TEL: 504-277-7562

TOLL FREE: 1-800-962-0917

## Taylor Laboratory Supplies Inc.

4367 Government Street Baton Rouge, LA 70806 TEL: 504-346-3015

■ Comments: This company does not advertise any chemicals for sale. But when asked, they will order some for you.

#### MASSACHUSETTS

## Doe & Ingalls

P.O. Box 560

Medford, MA 02155 TEL: 617-391-0090 FAX: 617-935-1014

■ Comments: V/MC, no min, order.

Ask for Annmarie.

#### MICHIGAN

#### Jade Scientific

8201 Ronda Drive Canton, MI 48187 TEL: 886-207-3775 FAX: 313-207-3879

■ Comments: Very nice young lady manning the phones. Will "sell anything except suspicious chemicals". V/MC, no min, order, Ask for Mike.

## **Universal Scientific & Industry**

5435 West Fort Street Detroit, MI 48209 TEL: 313-842-8200

■ Comments: Has some chemicals in stock but can order anything else. Says has "used" ground glass organic sets at super low prices. A strange-sounding old man named Joe Hadda talked to me. Says to call him first before visiting the store. This place is a little fishy.

## MINNESOTA

#### **Ash-Curt Scientific**

5480 Nathan Lane Plymouth, MN 55442 TEL: 612-550-0544 FAX: 612-975-9969

■ Comments: V/MC, no min. order.

#### Gallipot, Inc.

2030 Silverbell Road, Suite 11

St. Paul, MN 55122 FAX: 612-681-9001

TOLL FREE: 1-800-423-6967

■ Comments: V/MC, \$65 min. order.

Ask for Barb.

#### MISSOURI

#### Cee Kay Supply Inc.

4241 Folsom Avenue Saint Louis, MO 63110

TEL: 314-644-3500 FAX: 314-772-9522 ■ Comments: Sells specialty gasses only. Seems to have all of them though.

## **Laboratory Supply Company**

1009 Northeast Jib Court #A Lees Summit, MO 64064 TEL: 816-795-1140

TOLL FREE: 1-800-666-1140

## Lake Road Warehouse Company

1400 Southwest Lower Lake Road

Saint Joseph, MO 64504 TEL: 816-238-1100 FAX: 816-279-9049

■ Comments: Very helpful, crazytalking salesman sort of guy. No credit cards accepted. Discount prices.

#### **Midwest Scientific**

1157 RECO Avenue Saint Louis, MO 63126 TEL: 314-984-9997

#### **Midwest Scientific**

280 Vance Road Valley Park, MO 63088 TEL: 314-225-9997 FAX: 314-225-9998

TOLL FREE: 1-800-227-9997

URL: www.midsci.com

■ Comments: Mostly biological products but can special order.

## Scientific Supply Systems

143 McDonnell Boulevard Hazelwood, MO 63042

TEL: 314-731-3930

■ Comments: Is a little hesitant about individuals and this was the one entry I was hesitant to include in this list. But I thought about it awhile and decided to do so. Just talk to the man and see what's up.

#### MONTANA

#### Western Montana Scientific

3315 Washburn Street Missoula, MT 59801 TEL: 406-543-4959

#### NEBRASKA

#### Midland Scientific Inc.

1202 South 11th Street Omaha, NE 68108 TEL: 402-346-8352 FAX: 402-346-7694

■ Comments: V/MC, \$25 min. order.

Ask for Nathan.

#### NEVADA

#### Anachemia Chemical

1816 Deming Way Sparks, NV 89431 TEL: 702-331-2300 FAX: 702-331-2646

■ Comments: V/MC, no min. order.

Ask for Bill.

#### **JB Chemical Company**

3880 East Craig Road North Las Vegas, NV 89030

TEL: 702-644-7787 FAX: 702-644-8824

#### Legend Company

125 Manuel Street Reno. NV 89502 TEL: 702-786-3003 FAX: 702-786-3613

#### MGL Distributing

101 West Front Street Elko, NV 89801

TEL: 702-738-6560 FAX: 702-738-3793

## Sierra Chemical Company

2302 Larkin Circle Sparks, NV 89431 TEL: 702-358-0888 FAX: 702-358--0987

■ Comments: V/MC, no min. order.

#### **NEW HAMPSHIRE**

## **New England Scientific**

24 Stiles Road Salem, NH 03079

TEL: 603-898--3250

■ Comments: A Daigger products distributor. Also sells large equipment. Very nice lady I talked to.

## **NEW JERSEY**

#### Dawn Scientific Inc.

164 Emmet Street Newark, NJ 07114 TEL: 973-802-1004

■ Comments: No credit cards, no

min. order. Ask for Andy.

#### Industrial Environmental

24 F Commerce Road Fairfield, NJ 07004 TEL: 201-227-1700 FAX: 201-227-0023

■ Comments: No credit cards accepted, no min. order. Ask for David.

#### **NEW MEXICO**

#### Albuchemist Inc.

501 Wyoming Boulevard Southeast

Albuquerque, NM 87123 TEL: 505-268-7367

■ Comments: Geeky-sounding guy running the show (no offense). Definite sales of chems to public.

#### **NEW YORK**

#### **Accurate Chemical**

Westbury Long Island, NY TEL: 516-876-9545 FAX: 516-333-2221

■ Comments: Manufactures their own chems and sells to the public.

## Empire State Scientific Company

16 Corporate Circle East Syracuse, NY 13057

TEL: 315-463-9216

■ Comments: Sells glassware and everything else except chems. Very matter-of-fact about glassware as a public item. Just tell them you are a business and they will sell the chems.

## Kem Chemical Corp.

545 South Fulton Avenue Mount Vernon, NY 10550

TEL: 914-699-3110

■ Comments: Very nice folks. Great

place!

#### Superior Scientific Inc.

870 Dewitt Road Webster, NY 14580 TEL: 716-787-2630

■ Comments: Sells everything to individuals but chems. Sigh! Very mom & pop-ish. Are just nervy about chem sales to individuals because of all the pressure they say DOT is putting on them. Just tell 'em you're a business.

#### Ward's Natural Science Inc.

5100 West Henrietta Road West Henrietta, NY 14586

TEL: 716-359-2502 FAX: 716-334-6174

■ Comments: Some scientific supply but no chems. Won't sell chems to individuals or even businesses: just to teachers. (Yeesh, all these Yankee

stores suck!)

#### NORTH CAROLINA

#### Carolina Biological

2700 York Road Burlington, NC 27215 TEL: 910-584-0381

TOLL FREE: 1-800-334-5551

■ Comments: Some of you may recognize this as the place that 20/20 profiled a few years ago because they loaded semidead cats off to schools for dissection and/or paid for cats stolen from owners. To make amends and soften their image the company sells the full line of EM chemicals and almost everything else to the public. They want \$17.95 for their 1100-page catalogue. If you say you're a business then it is free.

## **Laboratory Supply Company**

112 Griffith Plaza Drive Winston Salem, NC 27103

TEL: 910-768-5648

TOLL FREE: 1-800-888-9004

■ Comments: Bulk sales. No chems.

Will order though. Nice folks.

#### Reagents Inc.

4746 Sweden Road Charlotte, NC 28273 TEL: 704-554-7474 FAX: 704-552-7594

TOLL FREE: 1-800-732-8484

#### OHIO

## **AEI Laboratory Supplies**

5438 Alger Drive Sylvia, OH 43560 TEL: 419-885-3993

■ Comments: Everything but chems.

Direct from manufacturers.

#### Apple Scientific Inc.

8378 Mayfield Road Chesterfield, OH 44026 TEL: 440-729-3056 FAX: 440-729-0928

TOLL FREE: 1-800-932-3056 URL: www.aplesci.com

■ Comments: Very friendly company. Very easy to order from. A VWR dis-

tributor.

#### Research Organics

2353 East 49th Street Cleveland, OH 44125 FAX: 216-883-1576

TOLL FREE: 1-800-321-0570

URL: www.resorg.com

■ Comments: A big-time company with a small-time feel. Order online or by phone. Great selection. Great prices. They do sell to individuals but you had better be cool when talking to them.

#### **QLP** Scientific

8436 Broadway Avenue Cleveland, OH 44105 TEL: 216-341-7118

■ Comments: Everything but chems. VWR and others. Cool guy though.

#### OKLAHOMA

#### **Brainard Chemical**

P.O. Box 470010 Tulsa, OK 74147 TEL: 918-622-1214 FAX: 918-585-2353

■ Comments: Doesn't accept credit cards. No minimum order. Ask for

Matt.

## Laboratory Supply Co.

723 North Ann Arbor Oklahoma City, OK 73127 TEL: 405-947-5895

FAX: 1-800-888-2500

#### Mid-America Chemical Inc.

207 Compress Street Oklahoma City, OK 73129 TEL: 405-670- 0101

FAX: 405-670-9270

## RSC Scientific Laboratory Products

6901 East 12th Street Tulsa, OK 74112

TEL: 918-836-4681 FAX: 918-836-7726 ■ Comments: Glassware and everything else but no chems to individuals. But said all he requires is a letterhead from a business to secure the goods no problemo.

## OREGON

## IIPC Chemical

P.O. Box 17376 Portland, OR 97217 TEL: 503-249-2985 FAX: 503-249-0966

■ Comments: V/MC, \$25 min. order.

#### **Industrial Labsales**

13509 Northeast Whitaker Way Portland, OR 97230

TEL: 503-255-8224

■ Comments: Sells bulk amounts of

chems.

#### **Markson Labsales**

5285 Northeast Elam Young Pkwy. #A400

Hillsboro, OR 97124 TEL: 503-648-0762 FAX: 503-648-8118 URL: www.markson.com

## **Nurnburg Scientific**

6310 Southwest Virginia Avenue

Portland, OR 97102 TEL: 503-246-8297 FAX: 503-246-0360

■ Comments: No credit cards, \$20 min. order. Ask for my man Tom.

## Springfield Scientific Supply

2600 Main Street Springfield, OR 97477 TEL: 541-726-9176 FAX: 541-747-1875

■ Comments: V/MC, no min. order.

Ask for Dwayne.

## **PENNSYLVANIA**

#### **Bodman Industries**

P.O. Box 2421 Aston, PA 19014 TEL: 610-459-5600 FAX: 610-459-8036

TOLL FREE: 1-800-241-8774

URL: www.bodman.com

■ Comments: Represents over 60 different companies. V/MC accepted.

## **Hawk Creek Laboratory**

RD 1, Box 686, Simpson Road

Glen Rock, PA 17327 TFI: 717-235-3849

TOLL FREE: 1-800-637-2436

■ Comments: A really nice guy running a family-like store. Is worried about getting sued so will only sell chemicals that are "non-hazardous" to individuals. Huh? So I asks. "NaOH? Sulfuric acid?" Nope and nope says the guy. Yeesh, I think. Sells everything else, though. Believe me on this one: just say you're a business. And don't sue this guy, either.

#### **Para Scientific**

Tyburn Road & Cedar Lane Fairless Hills, PA 19030 TEL: 215-736-0225

TOLL FREE: 1-800-229-7272 ■ Comments: Nice lady sellin' EM

chems and others.

## **Post Apple Scientific**

8893 Gulf Road

North East, PA 16428-4298

TEL: 814-725-3330 FAX: 814-725-9605

■ Comments: Retail and bulk sizes. Glassware, chems, everything. There is a hint of anti-government in this dude's mind. Highly recommended.

#### Scientific Equipment

15 Kent Road Ashton, PA 19014 TEL: 610-358-2855 FAX: 610-358-1475

■ Comments: V/MC, no min. order. Don't let the name fool ya. . . this place sells the full Spectrum cata-

logue to winos, baby!

#### **TENNESSEE**

## Laboratory Supply Co.

336 Wilhagen Road Nashville, TN 37217 TEL: 615-361-8501

TOLL FREE: 1-800-759-8830

#### Scientific Sales

130 Valley Court Oak Ridge, TN 37830 TEL: 423-483-9332 FAX: 423-483-0241 URL: www.scisale.com

■ Comments: Fisher/VWR, everybody. Will sell to individuals. Takes

credit cards.

#### **Tennessee Reagents**

3215 Ambrose Avenue Nashville, TN 37207 TEL: 615-227-1836 FAX: 615-228-1470

■ Comments: Distributes Ricca and other reagent solution makers. Has

some ACS chems as well.

#### TEXAS

## **Analytical Scientific**

11049 Bandera Road San Antonio, TX 78250 TEL: 210-684-7373 FAX: 210-520-3344

■ Comments: Baker/Mal, glassware. Very cool. But how would I know?

#### Aqua Solutions Inc.

6913 Highway 225 Deer Park, TX 77536

TEL: 281-479-2569 FAX: 281-479-2790

■ Comments: Very good aqueous

reagents at very low prices.

#### **Baron Chemical**

P.O. Box 1858

El Paso, TX 79950 TEL: 915-533-1661 FAX: 915-533-0088

■ Comments: V/MC, no min.. order.

Ask for Oscar.

## Capitol Scientific Inc.

2500 Rutland Drive Austin, TX 78758

TEL: 512-836-1167 FAX: 512-836-1338

## General Laboratory Supply Inc.

2835 Preston Avenue Pasadena, TX 77503 TEL: 281-487-0633

TOLL FREE: 1-800-777-7120

## Industrial Chemical & Scientific

11722 Charles Road Houston, TX 77041 TEL: 713-466-8776

FAX: 713-466-7963 TOLL FREE: 1-800-392-4047

■ Comments: Distributes for every-

one and sells everything.

#### Industrial Scientific Inc.

3612 Mangum Road Houston, TX 77092

## **Kerrville Scientific Company**

819 Water Street Kerrville, TX 78028 TEL: 210-896-3858

■ Comments: Ask for Marilyn.

#### Scientific Industrial Sales

3116 Saint Louis Avenue Fort Worth, TX 76110

TEL: 817-926-5437 FAX: 817-923-3923

■ Comments: V/MC, \$15 min. order.

#### UTAH

#### The Chemical Shop

1151 South Redwood Road Salt Lake City, UT 84104

TEL: 801-973-2682

## **Hi-Valley Chemical**

1134 West 850 North Centerville, UT 84014 TEL: 801-295-9591 FAX: 801-295-9448

#### Intermountain

1610 South Main Street SA

Bountiful, UT 84010 TEL: 801-547-5047 FAX: 801-547-5051

■ Comments: V/MC, no min. order.

#### **Laboratory Equipment & Supply**

2534 Directors Row Salt Lake City, UT 84104 TEL: 801-568-3403 FAX: 801-568-3406

■ Comments: Distributes for all. Very

nice man.

#### VIRGINIA

#### **Government Scientific Source**

8460-K Tyco Road Vicuna, VA 22182 TEL: 703-734-1805

TOLL FREE: 1-800-248-8030

■ Comments: Scary-sounding title but is not part of the government. However, its primary customers are the government and other institutions. But says they will take orders from

individuals "on occasion."

#### **Grande Junquetion Limited**

100 South Lynn Shores Drive Virginia Beach, VA 23452

TEL: 757-498-0404 FAX: 757-498-0532

■ Comments: Mostly lab equipment.

Some chems.

#### WASHINGTON

#### All World Scientific & Chemical

5515 186th Place Southwest

Lynnwood, WA 98307 TEL: 425-672-4228 FAX: 425-776-1530

■ Comments: V/MC, \$20 min. order.

Ask for Ron.

## Byrne Specialty Gasses Inc.

601 South Andover Street

Seattle, WA 98108 TEL: 206-621-8400 FAX: 206-621-1192

#### CANADA

## Moquin Scientific

Montreal H4X1J1 TEL: 514-353-2403 FAX: 514-353-7803

■ Comments: Good day, eh! Full service chems care of Spectrum Chemical. No credit cards accepted, no min. order. Ask for (snicker!) Pierre.

#### Canadawide Scientific, Ltd.

2300 Walkley Road

Ottawa, Ontario K1G 6B1

TEL: 613-736-8811 FAX: 613-736-0150

TOLL FREE: 1-800-2670-2362

■ Comments: Sells Baker chems, to

name a few.

## MEXICO

#### Cipo SA

Efrain Gonzales Luna #2389

Guadalajara, Jalisco TEL: 523-615-4931 FAX: 115-236-1595

■ Comments: Buenos dias! Compras las chemicas aqui! Hablas con Raul.

#### **PUERTO RICO**

#### Fis, Inc.

P.O. Box 190999 San Juan 00919 TEL: 809-788--0505 FAX: 787-289-0567

■ Comments: Mofongo anyone?

#### Manuel Del Valle, Inc.

P.O. Box 2527 Toa Baja 00759 TEL: 809-740-5410 FAX: 809-740-2487

# Other Laboratory Supply Companies

This is the list of alternative, retail laboratory supply companies. These are the sisters and brothers of the companies in the main list that absolutely sell to individuals. These are small, retail outlets that sell chemicals, glassware and equipment. But for some reason or another they just didn't make it to the "A" list.

Oh man was this a tough call! Some of these companies will sell to individuals but I may have found them a little too reluctant to do so or that they just seemed squirrelly to me. Even though they are "demoted" to this list, there is absolutely nothing wrong with these companies. If one were to use the methods of contact and purchase in the **Strategies** section of this book, then getting stuff from these companies will be absolutely no problem for an individual. True!

The reasons for why these companies are here are varied. Some were just a teensy bit reluctant about selling to individuals as a whole. And if there was even a shred of doubt on my part, or even a remote chance that one could not confidently buy from the company as an individual, then the company got shoved into this list. The majority of the companies are here because I had to use the "B word" on them. That's "B" as in Business, bubba! Most of the companies here needed to hear only five words to start the sale: "Yes, we are a business." That is all. Nothing else required.

A few of the companies (mostly the foreign ones) are here because I did not personally call or order from them so I have nothing to go on regarding their sales policies. But all the companies here sell the stuff you want. You're just gonna have to work a little bit to get it. Get it?!

#### ARIZONA

#### **Global Scientific**

2125 East 5th Street #111 Tempe, AZ 85281

TEL: 602-921-1710

■ Comments: These guys definitely

want credit refs.

#### CALIFORNIA

#### Advanced Scientific Supply

5474 Complex Street San Diego, CA 92123

■ Comments: Mostly medical supplies for hospitals but can get EM chemicals. A fake business will work.

#### **Alameda Chemical & Scientific**

1161 Avenida Acaso Camarillo, CA 93012 TEL: 805-388--5800 FAX: 805-389-4738

■ Comments: No credit cards accepted. No min. order. Ask for Fred.

#### Alameda Chemical & Scientific

900B 77th Avenue Oakland, CA 94621 TEL: 415-568-7338

#### Alameda Chemical & Scientific

1550 Vinci Avenue #100 Sacramento, CA 95838 TEL: 916-992-0121

#### **American Histology**

Lodi, CA 95241 TEL: 209-368-4031 FAX: 209-368-4130

P.O. Box 2539

■ Comments: Ask for Frank.

## **Applied Scientific**

154 W. Harris Avenue

South San Francisco, CA 94080

TEL: 415-244-9851

#### **Delamo Chemical**

535 West 152nd Street Gardena, CA 90248 TEL: 310-532-9214 FAX: 310-719-1342

■ Comments: No credit cards accepted. No min. order. Used to sell to individuals but changed. Ask for Ron.

#### **Eastwater Scientific**

30151 Baderas Avenue, Suite 100 Rancho Santa Margarita, CA 92025 TOLL FREE: 1-800-786-6027

■ Comments: Credit cards accepted. \$25 min. order. Must supply 3 bank or trade references. Yeesh, what a hassle! Ask for Sandy.

#### Holchem, Inc.

13546 Desmond Street Pacoima, CA 91331 TEL: 818-897-4679 FAX: 818-899-0871

■ Comments: No credit cards accepted. \$150 min. order. Used to sell to individuals.

#### **Los Angeles Chemical**

4545 Ardine Street Southgate, CA 90280 TEL: 213-562-9500 FAX: 213-773-0909

■ Comments: This company hates you. I don't even know why I included it here.

#### Milhorn Chemical

6142 Walker Avenue Maywood, CA 90279 TEL: 213-771-8301 FAX: 213-771-0529

■ Comments: V/MC, \$250 min. or-

der! Ask for Bill.

#### **Myriad Industries**

3454 E Street

San Diego, CA 92102 TEL: 619-232-6700 FAX: 619-232-4819

■ Comments: V/MC, \$25 min. order.

Ask for Kathlenne.

#### **Sonoma Supply Company**

419 1st Street

Petaluma, CA 94952 TEL: 707-778-1446

■ Comments: Strictly an exporter of

labware and chems.

#### Ted Pella, Inc.

P.O. Box 492477

Redding, CA 96049-2477

TEL: 916-243-2200

#### Ward's Natural Science, Inc.

P.O. Box 5010

San Luis Obispo, CA 93403-5010

TEL: 716-359-2502

## **Wholesale Supply**

1005 Lillian Way

Los Angeles, CA 90038

TEL: 213-467-4194

FAX: 213-466-5712

■ Comments: V/MC, no min. order. Ask for Bill. Used to sell to individuals.

## **Wilshire Chemical Company**

15324 South Broadway Street

Gardena, CA 90248 TEL: 310-323-9232 FAX: 310-770-4910

■ Comments: Sells all chems but no public sales. A business name will

suffice.

## COLORADO

#### CSI

12835 East Arapahoe Road Englewood, CO 80112 FAX: 303-792-3269

TOLL FREE: 1-800-635-1412

■ Comments: No credit cards accepted, no min. order. Ask for Kayla.

## **Hach Company**

P.O. Box 389

Loveland, CO 80537

TOLL FREE: 1-800-525-5940

## CONNECTICUT

#### Brand-Nu Lab

30 Mainard Street

Meriden, CT 06450 TEL: 203-235-7989

FAX: 203-235-7163

■ Comments: V/MC, no min. order.

Ask for Carrie.

## Macalaster Bicknell, Inc.

181 Henry Street New Haven, CT 06511

TEL: 203-624-4191

TOLL FREE: 1-800-468-6226

#### FLORIDA

#### Doe & Ingalls

9940 Currie Davis Drive, Suite 102

Tampa, FL 33619 TEL: 813-622-8824

#### Labsco

3069 Mercury Road Jacksonville, FL 32207 TEL: 904-739-9032

FAX: 904-739-8272

■ Comments: Mostly equipment. A few chems. Need an account to buy.

## Labworld International Corporation

2712 Northwest 112th Avenue

Miami, FL 33172 TEL: 305-718-8355 FAX: 305-718-8368

■ Comments: Strange company.

## Macalaster Bicknell, Inc.

2221 Forsyth Road, Suite B Orlando, FL 32807

TEL: 407-671-2525

## Scientific Supplies & Technology, Inc.

7245 Northwest 43rd Street

Miami, FL 33166 TEL: 305-593-2137 FAX: 305-477-4256

## GEORGIA

## LED Corp.

4220 Steve Reynolds Boulevard

Norcross, GA 30093 TEL: 770-923-8755 FAX: 770-925-8497

■ Comments: No credit cards accepted, \$25 min. order. Ask for Bill.

## **Ben Meadows Company**

P.O. Box 80549 Atlanta, GA 30366 TEL: 770-455-0907

## ILLINOIS

#### Central Scientific Co.

Franklin Park, IL TEL: 708-451-0150

■ Comments: A licensed distributor

for JT Baker/Mal.

#### Colombia Diagnostics

615 Kimberly Drive Carol Stream, IL 60188 TEL: 1-847-690-1213

TOLL FREE: 1-800-828-4375

## A. Daigger & Company

675 Heathrow Drive Lincolnshire, IL 60069

TOLL FREE: 1-800-478-9000

## Flinn Scientific, Inc.

770 North Raddant Road

Batavia, IL 60510 TEL: 630-879-6900 FAX: 630-879-6962

■ Comments: Sells all chems but only to teachers or schools. Should

be workable.

## **General Laboratory Products**

365 Remington Boulevard Bolingbrook, IL 60440 TEL: 630-759-8500

#### **Lab Source**

319 West Ontario Chicago, IL 60610 TEL: 312-944--0266 FAX: 312-944-7932

■ Comments: V/MC, no min. order.

Ask for Dave.

#### **Masters Chemical**

520 Bonnie Lane Elk Grove, IL 60007 TEL: 708-238-9292 FAX: 708-238-9297

■ Comments: Accustomed to dealing with waste water treatment

people. So be one then.

#### M.G. Scientific Inc.

1405 Busch Parkway Buffalo Grove, IL 60089 TEL: 708-520-0014

#### RPI

410 N. Business Center Drive Mount, Prospect, IL 60056

TEL: 708-635-7330

## **Scientific Supply Company**

9405 W. River Street Schiller Park, IL 60176 TEL: 847-281-7000

## **Utility Supply of America**

P.O. Box 737

Northbrook, IL 60065 TEL: 847-281-7000

## Wilkens-Anderson Company

4525 West Division Street Chicago, IL 60651

TEL: 312-384-4433

■ Comments: Sells it all. Only proof needed is your word that you are a

business.

## INDIANA

## **Mays Chemical**

7760 East 89th Street Indianapolis, IN 46256

TEL: 317-842-8722 FAX: 317-576-9630

■ Comments: V/MC, no min. order.

#### IOWA

## **Hach Company**

100 Dayton Avenue Ames, IA 50010 TEL: 515-232-2533

#### KANSAS

## **Distributor to Industry**

Wichita, KS

TEL: 316-236-9511

■ Comments: A Baker/Mal distributor.

#### **Midland Scientific**

Wichita, KS

TEL: 316-942-2200

■ Comments: A Baker/Mal distributor.

#### KENTUCKY

#### **PB&S Chemical**

Georgetown, KY TEL: 502-863-2874

■ Comments: A Baker/Mal distributor.

## **PB&S Chemical**

Henderson, KY TEL: 502-827-3545

■ Comments: A Baker/Mal distributor.

#### **Preiser Scientific**

1500 Algonquin Parkway Louisville, KY 40210-2308

TEL: 502-727-2902 FAX: 502-635-5377

■ Comments: Business letterhead will work to buy chems. All other stuff

is open to the public.

## LOUISIANA

## LaMarka Chemical

Baton Rouge, LA TEL: 504-272-8125

■ Comments: A Malinckrodt distributor.

## Scientific Supplies, Inc.

11940 Industrial Road Baton Rouge, LA 70816 TEL: 504-273-4928 FAX: 504-927-9045

■ Comments: They are a little hesitant with individuals. I found that they will do rush orders without verification.

#### MARYLAND

#### **PGC Scientifics**

P.O. Box 7277

Gaithersburg, MD 20898-7277

TEL: 301-620-7092

## **MASSACHUSETTS**

## American Bio Analytical

15 Erie Drive Natick, MA 01760 TEL: 508-655-4336

## Chemical Scientific, Inc.

67 Chapel Street Newton, MA 02158 TEL: 617-527-6626 FAX: 617-527-5827

■ Comments: Will very begrudgingly sell to an individual as long as they feel the chemicals are not too

naughty.

## **Columbia Diagnostics**

65 Shawmut Road Canton, MA 02021 TEL: 617-828-5665

TOLL FREE: 1-800-306-9911

■ Comments: Tell 'em EM sent you.

## MICHIGAN

## **Troy Scientific**

Warren, MI

TEL: 810-755-5151

■ Comments: A Mallinckrodt distributor.

## MINNESOTA

## **Apothecary Products**

11531 Rupp Drive Burhsville, MN 55337 TEL: 612-890-1948 FAX: 612-890-0418

■ Comments: V/MC, \$25 min. order.

### **Macro Scientific**

Brooklyn Center, MN TEL: 612-536-1234

■ Comments: A Mallinckrodt distributor.

## MISSISSIPPI

#### **Ideal Chemical**

Jackson, MS

TEL: 601-932-4920

■ Comments: A Mallinckrodt distributor.

#### Infolab, Inc.

P.O. Box 1309 (a.k.a. 61 Highway

North)

Clarksdale, MS 38614 TEL: 601-627-2283

TOLL FREE: 1-800-647-8222 TOLL FREE (MS): 1-800-222-9300

## MISSOURI

#### **Solutions Plus**

Fenton, MO

TEL: 314-349-4922

■ Comments: A Mallinckrodt distributor

## **Taylor Chemical**

950 Hanley Industrial Court

St. Louis, MO 63144 TEL: 314-962-5555

## MONTANA

#### **Northwest Scientific**

421 North 24th Street Billings, MT 59101 TEL: 406-252-3269 FAX: 406-245-2935

TOLL FREE: 1-800-628-4428

#### **NEW JERSEY**

## **Amend Drug & Chem**

Hillside, NJ

TEL: 201-926-0333

■ Comments: A Mallinckrodt distributor.

#### J & H Berge, Inc.

4111 Clinton Avenue South Plainfield, NJ 07080

TEL: 908-561-1234

#### **Bioclinical Lab**

15 Avenue A Alpha Ind Pk Phillipsburg, NJ 08865

TEL: 908-454-1177 FAX: 908-454-3124

■ Comments: V/MC, no min. order.

Ask for John.

## General Lab Supply

438 Pompton Road Wayne, NJ 07470 TEL: 201-561-1234 TEL: 973-956-9293

■ Comments: Sells both Baker/Mal.

EM etc.

## J & G Services & Supply

438 Pompton Road Wayne, NJ 07470 TEL: 201-956-9292

## **Laboratory Supply Dist.**

P.O. Box 1131

Mt. Laurel, NJ 08054 TEL: 609-235-2874

## Macalaster Bicknell

P.O. Box 109 (a.k.a. North and Depot Streets)

Millville, NJ 08332 TEL: 609-825-3222

TOLL FREE: 1-800-257-8405

## Scientific International, Inc.

228 Montgomery Street Bloomfield, NJ 07003 TEL: 973-743-1892

■ Comments: Likes to export. Says that export to individuals in the U.K. is no problem. As far as U.S. sales, just tell 'em your business name and nothing more.

#### Seidler Chemical

Newark, NJ

TEL: 201-465-1122

## **NEW YORK**

## Captree Chemical

West Babylon, NY TEL: 516-491-7400

■ Comments: Baker/Mal distributor.

#### **Cresent Chemical**

1324 Motor Parkway

Suite 108

Hauppauge, NY 11785 TEL: 516-348-0333

TOLL FREE: 1-800-877-3225

■ Comments: The rudest company I have ever dealt with. I call them up and a lady answers and I ask, "Does your company offer sales to the public?" The lady responds immediately

with a venomous, angry tone and nearly shouts her reply, "No!!! Absolutely not!!!" I then say, "No ma'am, you misunderstand. I simply needed to-" [Smash! Click!] She hung up on me in mid-sentence. Use of this company by a home researcher is obviously futile. But if you are an institutional business and are using this book as a resource reference. then it is obvious that your business has no need of a company who treats potential clients like that. Take your business elsewhere. Don't thank me for telling you this, folks. Believe me, it was my pleasure!

## Dynalab

P.O. Box 112 Rochester, NY 14601 TEL: 716-334-2060

#### **Krackeler Scientific**

P.O. Box 1849 (a.k.a. 57 Broadway)

Albany, NY 12201-1849 TEL: 518-462-4281

TOLL FREE: 1-800-334-7725

#### **Marsh Biomedical Products**

565 Blossom Road Rochester, NY 14610 TEL: 716-654-4800

#### **Nurnberg Scientific**

P.O. Box 590

Rockville Center, NY 11571

TEL: 516-766-7619

#### **Riverside Chemical**

North Tonawanda, NY TEL: 716-692-1350

■ Comments: Baker/Mal distributor.

#### Science Kit & Boreal Lab

777 East Park Drive Tonowanda, NY 14150 TEL: 716-874-6020

## **NORTH CAROLINA**

## Doe & Ingalls

607 Ellis Road Durham, NC 27703 TEL: 919-598-1986

FAX: 919-598-1707

## Infolab, Inc.

P.O. Box 20047 (a.k.a. 2501 Greengate Drive) Greensboro, NC 27406

TEL: 910-272-2874

TOLL FREE: 1-800-782-9000 TOLL FREE (NC): 1-800-443-9100

## Krackler Scientific, Inc.

P.O. Box 11326 (a.k.a. 607 Ellis Road, Bldg. 53-B) Durham, NC 27703

TEL: 919-596-7373

TOLL FREE: 1-800-222-6921

## OHIO

## Beckley Cardy, Inc.

P.O. Box 8101

Mansfield, OH 44901-8101

TEL: 419-589-2100

#### **FSC Educational**

Mansfield, OH

TEL: 419-589-9905

■ Comments: Mallinckrodt distributor.

## Ohio Valley Specialty Chem., Inc.

115 Industry Road Marietta, OH 45750 TEL: 614-373-2276

## **OKLAHOMA**

#### AWC, Inc.

3210 South Norwood, Suite A

Tulsa, OK 74135 TEL: 918-664-7911

## OREGON

## **High Purity Chemical**

Portland, OR

TEL: 503-249-2985

■ Comments: Baker/Mal distributor.

## **Industrial Lab Supply**

P.O. Box 30628 Portland, OR 97230 TEL: 503-842-8722 FAX: 503-255-8367

■ Comments: No credit cards accepted, no min. order. Ask for Brian.

## PENNSYLVANIA

## Bowman Mell Co.

Harrisburg, PA TEL: 717-238-5235

■ Comments: Baker/Mal distributor.

## **Burrell Corporation**

2223 Fifth Avenue Pittsburgh, PA 15219 TEL: 412-471-2527

■ Comments: Just talk to 'em.

#### **EMSCO**

P.O. Box 28032 Philadelphia, PA 19131 TEL: 215-477-5601

#### **Reading Scientific**

2200 North 11th Street Reading, PA 19604 TEL: 610-921-0221 FAX: 610-921-9771

■ Comments: No credit cards accepted, no min. order. Used to sell to individuals.

#### **Charles Wagner**

4455 North 6th Street Philadelphia, PA 19140

TEL: 215-457-0600 FAX: 215-457-2710

■ Comments: No credit cards accepted, \$75 min. order. Ask for Diane.

## **RHODE ISLAND**

#### **American Chemical**

P.O. Box 6031

Providence, RI 02940 FAX: 401-421-5909

TOLL FREE: 1-800-662-3402
■ Comments: No credit cards, no

min. order. Ask for Sally.

## **Ultra Scientific**

250 Smith Street

North Kingstown, RI 02852

TEL: 401-294-9400

#### Wilkem Scientific Ltd.

248 Pine Street

Pawtucket, RI 02860 TEL: 401-723-1840 FAX: 401-724-8760

TOLL FREE: 1-800-766-5676

■ Comments: First time I called this place, the lady thought about selling to me as an individual for a long time. Finally she decided no, but said that as a business, all I need to do is FAX a company letterhead. A second call DID produce a mock purchase with another lady whom I told that I was an individual. This one's a toss-up.

#### **TENNESSEE**

## **Edge Biologics**

Memphis, TN

TEL: 901-523-0034

■ Comments: Mallinckrodt distributor.

## **Ideal Chem & Supply**

Memphis, TN

TEL: 901-363-7720

■ Comments: Mallinckrodt distributor.

## Reagents Inc.

3215 Ambrose Ave. Nashville, TN 37207 FAX: 615-228-1470

TOLL FREE: 1-800-233-1836

■ Comments: V/MC, \$25 min. order.

#### TEXAS

#### AWC

5050 Timber Creek Houston, TX 77017 TEL: 713-944-2100

#### AWC

Freeport, TX

TEL: 409-239-2051

#### **BVA Scientific**

4868 Research Drive

P.O. Box 691468

San Antonio, TX 78269-1468

TEL: 210-699-0032 FAX: 210-699-8809

TOLL FREE: 1-800-257-6474

■ Comments: General lab supply.

Represents all but prefers Baker/Mal.

Chems, V/MC.

#### **Cima Scientific Products**

P.O. Box 781302 Dallas, TX 75378 TEL: 214-353-9333 FAX: 214-353-2626

■ Comments: "Creating global distribution for American laboratory prod-

ucts."

## **Gallade Chemical**

TEL: 619-489-0798

#### **Fox Scientific**

1110 WTO Harris Road, Suite 102

Arlington, TX 76017 TEL: 817-472-0555 FAX: 915-533-0088

■ Comments: V/MC, no min. order.

Ask for Tim.

#### Infolab, Inc.

3000 Greenhill Drive Round Rock, TX 78664 TEL: 512-256-7994

FAX: 512-244-9659

TOLL FREE: 1-800-322-3882

#### **Lab Products**

P.O. Box 430487 Houston, TX 77243 TEL: 713-973-7703

#### **Lewis Chemical**

Beaumont, TX TEL: 409-842-5911

■ Comments: Mallinckrodt distributor.

#### **Thermal Scientific**

Odessa, TX

TEL: 915-337-2352 OR: Amarillo, TX

TEL: 806-335-1711 OR: Corpus Christi, TX TEL: 512-884-7152

■ Comments: Mallinckrodt distributors.

## VIRGINIA

## Colombia Diagnostics, Inc.

8001 Research Way Springfield, VA 23153 TEL: 703-569-7511 TOLL FREE: 1-800-366-3081

## A. Daigger & Company

4002 University Drive Fairfax, VA 22030 TEL: 703-246-9090

#### Virginia Lab Supply

10470C Wilden Drive Lakeridge Park Trade Center Ashland, VA 23005

TEL: 804-550-2000 FAX: 804-550-2770

■ Comments: V/MC, \$25 min. order. Used to sell to individuals. Ask for

Sue.

#### WASHINGTON

## **Scientific Supply**

925 Poplar Place Seattle, WA 93144 FAX: 206-322-1153

TOLL FREE: 1-800-441-0088

■ Comments: V/MC, no min. order. Used to sell to individuals. (Why do I keep saying this? Because these businesses still have a soft spot for the little guy. Sometimes.)

## WEST VIRGINIA

#### **Preiser Scientific**

94 Oliver Street

St. Albans, WV 25177 TEL: 304-727-2902 FAX: 304-727-2932

TOLL FREE: 1-800-624-8285

■ Comments: V/MC, \$25 min. order. Ask for John. Just Give 'em your busi-

ness name.

#### WISCONSIN

#### Laabs Inc.

Milwaukee, WI TEL: 414-342-0145

■ Comments: Mallinckrodt distributor.

## Lab Safety Supply Co.

P.O. Box 1368 Janesville, WI 53545 TEL: 608-754-2345

#### MG Scientific

P.O. Box 404

Pleasant Prairie, WI 53158

TEL: 414-947-7000 FAX: 414-947-7007

■ Comments: No credit cards, \$100

min. order. Ask for Cindy.

#### **North Central Labs**

P.O. Box 8

Birngmwood, WI 54414 TEL: 715-449-2673

## **United Scale and Engineering**

New Berlin, WI TEL: 414-785-1733

■ Comments: Mallinckrodt distributor.

# Foreign Laboratory Supply

I have not talked with any of the lab stores in this next list. But I have talked to the US companies whose products these foreign distributors carry. For example, I would petition a US chemical maker that sells retail here in the US for their list of foreign distributors that do the same. Keep in mind that I am not asking huge companies like Aldrich or Baxter for their equally huge and just as inaccessible outlets in foreign lands. No. I contacted small, independent manufacturers and/or distributors that sell retail to the public or "almost" do so. Yet these companies were big enough, or aggressive enough, that they were trying to sell their products thru equally small and accessible foreign lab supply stores.

To reinforce my theory I would call the company in the US and tell them that I was planning to move to Brazil (or wherever) and noticed that they had a distributor in the country. I would say that I was going to open up a lab down there but would not have any bank or credit references for the first few months and wondered how the foreign lab store would sell me the products I need without all the account hassles. Without exception, the US sales rep would tell me that that was no problem at all and that the foreign stores (these foreign stores listed below) will sell openly to me. Pay with credit card. Pay in cash. It didn't matter. The only exceptions are the Canadian companies. They may or may not have sales restrictions, so you better ask (eh?).

## ARGENTINA

## Anedra, S.A.

Sarmiento 1803 1646 San Fernando Buenos Aires, Argentina FAX: 54-51-25-9730

#### Asinteg SRL

Av. Gaona 2571 1416 Buenos Aires, Argentina

TEL: 54-1-581-1439

#### **Biomed Brokers**

Maipu 474

4 Piso Of. G 1006

Buenos Aires, Argentina

TEL: 54-1-322-3791 FAX: 54-1-393-7048

E-MAIL: biomed@dacfyb.edu.ar

## Migliore-Laclaustra SRL

Libertad 836 - 351

1012 Buenos Aires, Argentina

TEL: 54-1-8160820 FAX: 54-1-8160564

EMAIL: LACLAUS@Interserver.com.ar

#### **Genex Diagnostics SRL**

Timoteo Gordillo 4229

Buenos Aires CP 1439 Argentina

TEL: 541-601-4816 FAX: 541-622-2416

## **AUSTRALIA**

## Bio Scientific Pty, Ltd.

P.O. Box 78 Gymea, NSW 2227 PHONE:

Sydney metro: (02) 9521 2177
Australia: 1800 251 437

New Zealand: 0800 444 157
 FAX: 029-542-3100

WEBSITE: www.biosci.com.au E-MAIL: daryn@biosci.com.au

#### **Proscience**

33-35 Keysborough Avenue Keysborough Avenue Victoria, Australia 3173 TEL: (61) 03-9706-3655

#### **AUSTRIA**

#### **BioTrade**

R.u.P. Margaritella Ges.m.b.H, Breitenfurter Str. 480

A1230 Vienna, Austria TEL: 43-1-889-18-19 FAX: 43-1-889-18-19-20 EMAIL: bio-trade@telecom.at

#### BELGIUM

## sa N.T.L. nv

20 Rue de Pavie Paviastraat 20

Bruxelles 1000 Brussels, Belgium

TEL: 32-2-732-23-30 FAX: 32-2-733-15-39

## BRAZIL

#### S. Goldberg

Rua Avanhandava 675 Bela Vista, Sao Paulo, SP FAX: 011-257-7293

## Sellex, Inc.

Rua Cardoso de Almeida 788-11 Andar 05013-001 Sao Paulo SP Brazil

TEL: 55-11-872-2015 FAX: 55-11-872-1024 EMAIL: sellexbr@ibm.net

#### BULGARIA

#### Arco

P.O. Box 19

Sofia 1606 Bulgaria

TEL: 395-2-9885780/981654

FAX: 395-2-981-6395

## CHILE

## Biocronogen Ltda.

Santa Ines #1870 LaFlorida, Cusilla 23 Correo 47. LaFlorida Santiago, Chile TEL: 56-2-287-3802

FAX: 56-2-287-3802

### CANADA

## Anachemia Columbia

3571 Viking Way #10 Vancouver, BC V6V 1W1 TEL: 604-270-2252

#### Anachemia Science

4-214 DeBaets Street Winnipeg, MB R2J 3W6 TEL: 204-661-6734

## Anachemia Science

6535 Millcreek Drive, Unit #69 Mississauga, ON L5N 2M2

TEL: 905-567-8292

#### Anachemia Science

255 Norman

Ville St.-Pierre, PQ H8R 1A3

TEL: 514-489-5711

■ Comments: No credit cards accepted, \$100 min. order. Ask for

Mark.

#### Canadawide Scientific Ltd.

2300 Walkley Road Ottowa, ON K1G 6B1 TEL: 613-736-8178

#### Xenex Lab, Inc.

2402 Canoe Avenue Coquitlam Can BC V3K6C2

TEL: 604-552-3031 FAX: 604-552-3036

■ Comments: No credit cards accepted, no min. order. Ask for

Henry.

## CHINA

## Fudan Biotechnology, Inc.

Suite 1306, Zhongyuan Bldg. No.1-60 Long, Zhongyuan Rd. Shanghai 200438

P.R. of China

TEL: 86-21-652-42386 FAX: 86-21-652-42384

EMAIL: dkfdbiot@gate.uninet.co.cn

## Shanghi Sangon

Biological Engineering Ltd.

495 Guiping Rd.

15 Bldg., Suite 6B2 Shanghai P.R. China

TEL: 8621-6474-6299 FAX: 8621-6474-7090 Canadian Address:

BioBasic Inc.

3440 Pharmacy Ave., Unit 12-13 Scarborough, ON MLW 2P8

Canada

TOLL-FREE: 1-800-313-7224

TEL: 416-494-0014 FAX: 416-499-6062

## Jingmei Biotech, Co. Ltd.

Taike DA Sha

Meilin, Shenzhen 518049 FAX: 86-755-3317046

## DENMARK

## Medinova Scientific ApS

Ellemosevej 19 DK-2900 Hellerup, Denmark

TEL: 45-39-56-2000 FAX: 45-39-56-1942

URL: http://inet.uni-c.dk/~medinova

## **EGYPT**

## **BioMed Egypt**

29 Yathreb St., 12311 Dokki

P.O. Box 384 Giza, Egypt

TEL: 20-2-3365125 FAX: 20-2-3782902

## Medicopharmatrade

4 Zamzam Street Behind Shooting Club Dokki, Egypt

TEL: 20-2-3498311 FAX: 20-2-3481468

#### **MPT Medicopharmatrade**

45, Ahmed Orabi St. Agouza, Giza

FAX: 202-348-1468

## **Versa Trade International**

152 Campbell Avenue Toronto, ON M6P 3V2 FAX: 416-532-7252

## **EL SALVADOR**

## Laboratorios Clinicos Menendez

79 Ave. NTE. y 3a Calle Pte.#4 San Salvador, El Salvador

TEL: 503-263-5660 FAX: 503-263-5849

#### FINLAND

## Finnzymes Oy

P.O. Box 148

SF 02201 Espoo, Finland TEL: 358-9-584-121 FAX: 358-9-584-12200 EMAIL: FZ@finnzymes.fi

#### FRANCE

#### Interchim

213, Avenue J.F. Kennedy BP 1140 03100 Montlucon, France

TEL: 33-4-70-03-88-55 FAX: 33-4-70-03-82-60 EMAIL: interchim@calva.net

#### Microtech

Parc du Chater 33 Rue Bellisen 69340 Francheville, France TEL: 33-4-78-34-21-67 FAX: 33-4-78-34-12-39

### Coger

79, Rue Des Morillons

Paris 75015

FAX: 004-533-6166

## GERMANY

## **Applichem GmbH**

Ottoweg 10 Darmstadt 64291 FAX: 615-135-1072

## **Biometra**

Rudolf-Wissell Strasse 30 37079 Goettingen, Germany

TEL: 05-51-50-686-0 FAX: 49-05-51-50-686-66 URL: www.biometra.de

#### **Carl Roth GmbH**

Poatfach 211162 D 7500 Karlsruhe 21 FAX: 072-156-0649

## Finechem Feinchemikalein GmbH

Hauptstr. 56 Sigarszell D-881-38 FAX: 838-920-4303

#### Gerbu GmbH

Am Kirchwald 6 Gailberg D-69251 FAX: 062-234-7199

## GREECE

## Diachel Diagnostic, Chemical Instrumentation Ltd.

S. Merkuri

78 & 1 Alkimachou Str. 116 34 Athens Greece

TEL: 30-1-7235523/7243911

FAX: 30-1-7219874

## **HONG KONG**

## Bio-Gene Technology Ltd.

Unit 24 14/F, Block D Wah Lok Ind. Ctr.

31-41 Shan Moi St., Fo Tan

FAX: 852-686-8806

#### Science International

14th Floor Gee Tuck Bldg. 16-20 Bonham Strand East Hong Kong

TEL: 852-2543-7442 FAX: 852-2541-4089

## **BCH Medical Supplies Co.**

Unit 4, 13/F, Block A MP Industrial Ctr. 18 Ka Yip St.

Chai Wan Hong Kong TEL: 852-8983008 FAX: 852-8983041

## **Adv. Technology**

8/F BLK H, Kingland Bldg 739 Nathan Rd.

Mong Kok, KLN Hong Kong

TEL: 852-239-02293 FAX: 852-278-98314

#### **China South**

Rm. 130-3-4 13/F Remex Centre 42 Wong Chuk Hang Rd. Hong Kong

TEL: 852-2552-8339 FAX: 852-2552-6883

## Tin Hang Technology Ltd.

Shop #3, G/F Ture Light Bldg No. 102 Third St.

Hong Kong

TEL: 852-268-12-895 FAX: 852-269-95-827

#### **TWC Biosearch International**

Statin Central / P.O. Box 50 Statin

FAX: 852-26350379

## Shanghi Long March-Trace Medical Science Co.

205 Fu Jian Road Mid Shanghai 20000-1 FAX: 021-351-5849

#### INDIA

## BioBusiness Development Agency

C-76 Fateh Nagar Jail Road

New Delhi 110 018 FAX: 91-11-559-6820

#### Genetix

C-88, Kirti Nagar New Delhi India

TEL: 91-5421714/5467637 FAX: 91-11-546-7637

## IRELAND

#### Anachem Ltd.

Anachem House Charles Street Luton, Bedfordshire LU2 0EB

United Kingdom TEL: 44-1582-745040 FAX: 44-1582-391768

## Lennox Laboratory Supplies, Ltd.

John F. Kennedy Drive

Naas Road Dublin 12 United Kingdom TEL: 3531-455-2201

FAX: 3531-450-7906

#### ISRAEL

## **Getter Photo Supplies**

23 Jabotinski Road Ramat-Gan 52511 FAX: 003-752-3620

#### Tamar

Sapir Centre Givat Shaul

P.O.B. 35055

Jerusalem, 91350 Israel TEL: 972-2-6520279 FAX: 972-2-6528361

## ITALY

#### Chebios S.R.L.

Via Livorno 25 Rome 00162

FAX: 064-429-0724

#### **Prodotti Gianni**

Via M. F. Quintiliano, 30 20138 Milano, Italy TEL: 39-2-5097-2 FAX: 39-2-5097-358

EMAIL: gfranci@mbox.vol.it

#### **Medite Histotechnic**

Via Locatelli 27

24057 Martinengo Italy TEL: 39-363-904962 FAX: 39-363-948000

#### M-Medical SRL

Via Pier Capponi, 57 Firenze 50132 FAX: 055-5001875

## Societa' Italiana Chimica

Via Luigi Pulci 27 Roma 00162

FAX: 064-429-0775

## **JAPAN**

## Cosmo Bio Co., Ltd.

Toyo Ekimae Building 2-2-20 Toyo, Koto-ku Tokyo 135, Japan

TEL: 81-3-5632-9630 FAX: 81-3-5632-9624

#### Funakoshi Co. Ltd.

Jupiter Uni Bldg. 9-7 Hongo 2-Chome Bunkyo-Ku, Tokyo FAX: 035-684-1633

### **JORDAN**

#### Hiatco

11203 Harborside Drive Largo, FL 34643 FAX: 813-399-9817

#### KOREA

#### KDR Biotech Co. Ltd.

506-4, Amsa 2

Dong, Kangdong - Ku Seoul 134-052 Korea TEL: 82-2-3427-6000 FAX: 82-2-427-3393

#### **Essence International Corp.**

2nd Floor Jong Poong B/D

PO IE Dong 218-12 Kang Nam Gu

Seoul, Korea 135-260 TEL: 822-579-9433 FAX: 822-572-3427

## Song Am Trading Co. Ltd.

95-5 Soonae-Dong, Boondang-Ku

Sungnam City, Kyungki-Do

## FAX: 342-717-7904

# LITHUANIA

## **MBI Fermentas AB**

Graiciuno 8

Vilnius 2028 Lithuania TEL: 370-2-641279 FAX: 370-2-643436

E-MAIL: info@fermentas.lt

## MALAYSIA

## BioSynTech Sdn Bhd

81-1B Jalan Bandar Satu Pusat Bandar Puchong 47100 Puchong, Selangor

Malaysia

TEL: 603-4321357 FAX: 603-4322468

#### Megah Suria

No. 1, Pejabat Pos Ampang, 16A Jalan Watan 6, Ampang Sq. Selangor Darul 68000 FAX: 603-492-3800

## MEXICO

#### **Biomedix**

Vainilla 113

Col. Granjas Mexico Mexico DF CP 08400

Mexico

TEL: 52-5-654-4242 FAX: 52-5-654-4245

## Control Technico Y Rep., S.A.

De C.V., Lincoln #3410 Pte.

Col. Mitras Nte. Monterrey, N.L. FAX: 528-373-2891

#### **BQ** - The Providers / Consulab

Rancho San Lorenzo 38-204A Los Girasoles, Coyoacan 04920DF

FAX: 525-678-1931

## **NETHERLANDS**

## Lucron Bioproducts B.V.

Ovenberg 12

NL-6596 DP Milsbeek

The Netherlands TEL: 31-485 511675

FAX: 31-485 512052

#### Klinipath B.V.

ët Holland 31, 6921 GX Duiven P.O. Box 195

6920 AD Duiven

The Netherlands

TEL: 31-08367-66466 FAX: 31-8367-66777

## Westburg B.V.

Arnhemseweg 87 P.O. Box 214 AE Leusden 3830

FAX: 313-395-1222

## NORWAY

## Heigar & Co. A/S

P.B. 137

Kalbakken 0902 Oslo

Norway

TEL: 47-22-25-50-54 FAX: 47-22-25-56-30

#### **PANAMA**

## Compu Cientifica

Calle 61 #51D-57

Apto. 415

Medellin AA 49220 FAX: 004-231-9313

## POLAND

## Igena S. C.

30-106 Krakow Senatorska 27/7

Poland

TEL/FAX: 48-12-637-21-89

E-MAIL: igena@rabbit.if-pan.krakow.pl

Lumitek (U. S. Contact)

50 W 72nd Street #204

New York, NY 10023 TEL: (212) 873-4117

FAX: (212) 787-6226

## for Pro Scientium Sp. z.o.o.

ul. Krasinskiego 10

01-615 Warsaw

Poland

TEL: 48-22-331-836 FAX: 48-22-33-26-74

#### PORTUGAL

## Material Cientifico E Industrial, S.A.

Rua Actriz Adelina Fernandes #13-A/B 2795 Linda - A - Velha

Portugal

TEL: 351(01)414-0325 FAX: 351(01)414-0357

## SLOVAK REPUBLIC

## Slovak RepublicBio Vendor Ltd.

Akademick 2 949 01 Nitra Slovak Republic

TEL/FAX: 421-87-33160 or 421-87-31538

#### SINGAPORE

## All Eight Marketing Srvc.

14 Shaw Road #02-01 BTC Building

Singapore 1336 TEL: 65-2886388

FAX: 65-2849805

## Ace Scientific Instruments and Chemicals Pte Ltd.

Block @, Balestier Hill Shopping

Center, #01-645 Singapore 320002 TEL: (65) 252-4387 FAX: (65) 253-1990

## SOUTH AFRICA

#### **Anatech Instruments**

P.O. Box 98485 Sloane Park

2152 Gauteng, South Africa

TEL: 27-11-792-3300 FAX: 27-11-792-3363

#### Labretoria BK/CC

P.O. Box 95777 Waterkloof 0145 FAX: 271-246-4113

#### **B & M Scientific**

P.O. Box 39011 Crawford 7764 FAX: 021-934-8623

#### SPAIN

## Iberlabo S. A. Avda. del Mediterraneo

13 28007 Madrid, Spain TEL: 34-1-551-14-91 FAX: 34-1-552-94-03

## Quimigranel S.A. Orense, 34-9f

28020 Madrid, Spain TEL: 34-1/556.1614 FAX: 34-1/555.0374

## SWEDEN

#### A. B. Labassco

Aminogatan 30 S-431 53 Moindal Sweden

TEL: 46-31-706-30-00 FAX: 46-31-706-30-30

## Electra Box Diagnostica AB

Box 2035

Tyreso 2 13502 Sweden TEL: 46-8-7123000 FAX: 46-8-712-6509

## SWITZERLAND

## **Juro Supply AG**

Cysatstrasse 23 A Lucerne 5 6000 FAX: 414-151-4564

## Alexis Corp. (Switzerland)

Alte Hauensteinstrasse 4 Postafch, Laufelfingen CH-4448

FAX: 162-299-2480

## **Lightning Instrumentation**

Chemin des Ramiers 22

Modern City B

CH-1009 Pully-Lausanne

Switzerland

TEL: 41-21-7283066 FAX: 41-21-728-30-67

#### P. H. Stehelin & Cie AG

Spalentorweg 62 CH-4003 Basel Switzerland

TEL: 41-61-272-3924 FAX: 41-61-271-3907

## TAIWAN

## **Grow Biotechnology Inc.**

8F, 82, Section 1, Hahn-Hai Road

FAX: 002-365-4509

## Easy Biomedical Co. Ltd.

23 Taiping Street Shulin, Taipei 238 FAX: 886-2-683-3727

## **Everlight Trading Co.**

P.O. Box 101-125, No.502/5F Fu-Hsing N. Road, Taipei FAX: 002-501-0973

## Harvester Trading Co., Ltd.

Harvester Bldg. 311 Tung Hua N Road

Taipei 10592 Taiwan R.O.C.

TEL: 886-2-25149215 FAX: 886-2-27160459

# Protech Technology Enterprise Co., Ltd.

3rd F, No. 37, Yen-Ping S. Road P.O. Box: Chung-Ho 38-382 Taipei, Taiwan Republic of China

TEL: 886-2-381-0844 FAX: 886-2-311-8524

## **Kuo Yang Scientific Corp.**

4F, No. 2-1, San Min Road Hsin Tien City, Taipei FAX: 886-2-9141167

## THAILAND

#### Gibthai Co., Ltd.

Gibthai Bldg. 44/6 Suthisarn Rd. Huay Kwang, Bangkok 10310 Thailand

TEL: 66-2-2748331-3 FAX: 66-2-2748336

#### Biotechnical Co., Ltd.

1895/25 Paholyotin Road Lardyao, Jatujak Bangkok 10900

Thailand

TEL: 662-579-5490 FAX: 662-561-1761

## UNITED KINGDOM

**Alexis Corp.** (United Kingdom) 3 Moorbridge Court,

Moorbridge East Rd.

Bingham, Nottingham NG138QG

FAX: 949-083-6222

### **Bio-Stat**

Bio-Stat House, Pepper Road Hazel Grove, Stockport SK75BW

FAX: 161-483-5778

## BMG Labtechnologies Ltd.

6 Rivington Road

Hale Chesire WA15 9PH

FAX: 161-929-8281

## **Bio-Stat Diagnostics**

Bio-Stat House Pepper Rd. Hazel Grove Stockport SK7 5BW United Kingdom

TEL: 44-(0)161-483-5884 FAX: 44-(0)161-483-5778

#### Anachem Ltd.

Anachem House Charles Street Luton, Bedfordshire I

Luton, Bedfordshire LU2 0EB United Kingdom

TEL: 44-1582-745040

FAX: 44-1582-391768 EMAIL: info@biometra.co.uk

#### M & G Chemicals, Ltd.

84-86 Wellington Road North Stockport, Cheshire SK4 1HW

FAX: 061-480-7008

#### Melford Labs

Bildeston Road, Chelsworth Ipswich, Suffolk IP7 7LE FAX: 044-974-1217

#### VENEZUELA

#### Distribuidora Multilab C.A.

Clipper V-1002, 7223 NW 43rd Street Miami, FL 33166 FAX: 305-592-4376

# The Rogues' Gallery

There are a few US lab companies whose activities and sales practices merited special attention here. These are the companies that have placed themselves directly into the fray of the underground and private research arena. Advertizing directly to this audience very much contradicts the norm and necessitates that these companies be placed under the highest scrutiny posssible. My scrutiny. The following is only my opinion. You, ultimately, must make the decision yourself as to whether you wish to buy from these people.

## Advance Scientific & Chemical, Inc.

2345 SW 34th Street Ft. Lauderdale, FL

TOLL FREE: 1-800-524-2436 URL: www.advance-scientific.com

■ Comments: I didn't have to do any massive search to find this company. All I had to do was look in my own city's yellow pages to find the address of this Florida company. In fact, this company is in almost every yellow pages in the nation. Right down to the littlest 50 page yellow pages of the smallest towns I could find. A monster, unprecedented advertising saturation of the chemical retail market of this nation. A giant chemical distributor? Hardly. It is just a small building with a gravel parking lot on a semi-isolated road (believe me, I know).

I once called this store to test its intentions. I requested (only requested, mind you) two of the most illegal chemicals in the world: Phenylacetone and Methylamine. They quoted me a price and were ready to send them to me. I hung up immediately.

Other lab company owners have confided to me that they know Advance is a national DEA front company. I have no doubt. But they will sell any citizen whatever they want. So if you don't mind the potential scrutiny, then by all means buy from them. Heaven help you.

#### **Chemical Resale of Santa Barbara**

URL: www.sb.net/wirehead

■ Comments: As this book is going to press (early 1998), the owner of the CRSB (Tom Kasper) is in jail and the CRSB is in jeopardy. It is Tom's hope that volunteers will help to make the business run again but it does not look good at this time. And yes, the CRSB is/was a legitimate business. So all you conspiracy theorists and trouble makers were raising hell over the CRSB for nothing.

## Logan Ag. Lab & Supply

848 Riggins Road Adairville, KY 42202 TEL: 502-539-7081

FAX: 502-539-7082

■ Comments: Owned by Bud Riggins. This company actually contacted me asking for a plug on my website. No legit lab company would normally do this. But I wanted to give them the benefit of the doubt so we corresponded thru email a few times and they sent me a catalogue. Big mistake.

Like a lot of lab supply companies, Logan has its own "in-house" catalogue of chemicals they either stock or feel are common enough to include in a basic catalogue. Here are some of the chemicals I found interspersed among the NaCl and sulfuric acids of this little agriculture lab supply store: Allyl benzene, benzocaine, phenylacetonitrile, phenyl-2butanone, benzylbromide, 3-bromobenzaldehyde, 4-bromobenzaldehyde, 2 & 3-bromoanisole, L-Chloroephedrine hydrochloride, 2-chloro-1phenylpropane, 4-chloro-alpha-methylstyrene, every imaginable benzaldehyde, 2,5-dimethoxyphenylacetone (the P2P for DOM), all imaginable beta-nitropropenes including (my god) 3,4-methylenedioxyphenyl-betanitro propene, MD-P2P (!), every conceivable tryptamine precursor, cocaine precursors etc. ad infinitum!!!

I could go on forever about this catalogue that is almost exclusively geared towards every conceivable drug precursor in the world. Oh yeah, they also have a small section on waste water treatment supplies. Hey,

that balances it all out don't ya think? I was beginning to think something was fishy.

## "ThE WaTcHeR's Homepage"

URL: www.geocities.com/capecanaveral/lab/4444/

■ Comments: This website used to be, and still is, about basic chemistry methodology. The owner of the site is also a regular attendant of the alt.drug.chemistry drug chemistry newsgroups. A few months ago he started to sell glassware and basic chems from his site.

The stuff he sells is very safe and none of it is watched which I do give the guy credit for. Prices are good too. But if one is going to enter the high stakes arena of promoting chem sales to the underground then one had better expect to be very, very suspect and be prepared to know what he's doing. In my opinion, this guy is not on the level. I have had two dialogues with him. In these discussions he either could not, or would not, answer questions about the regulatory aspects of the products he sells. Very important questions that one had better know if one wanted to get into the game he was playing. If he really doesn't know the answers then he can get in a lot of trouble. If he knows the answers and was being evasive (my interpretations) then it may very well be you that will get in a lot of trouble. I, personally, will not order from this place. Again, it is up to you to decide.

# Glassware

Yes, folks. An entire section devoted to our old friend: glassware. There's been a lot of conjecture about glassware, so I hope I can clear things up for you in this regard.

The first thing you need to know is that it is legal to own glassware in all 50 states. It is not a drug. It is not a precursor chemical, meaning that none of the glassware's molecules become a part of, or actively convert the atoms of another into a drug. It is just a set of inanimate objects or tools. To say that glassware's main purpose in this world is for making drugs is ludicrous. Its utility to the public is too vast for it to be outlawed.

I don't know why, but I keep wanting to liken glassware as being similar to guns. The Constitution says you can own a gun. And you can get a gun without any problems at thousands of pawn stores and gun shops around the nation. The catch is, the government likes to know who owns guns so it keeps records on those that buy them. As it so happens, some of the individual States consider guns to be a greater concern than other States do. So they, in turn, like to impose their own set of restrictions on top of the national ones.

In a way, the glassware situation is similar to this. But in other ways it is very different. Glassware and guns are both inanimate objects. But glassware is not inherently lethal. Therefore, there is no national restriction to its purchase of any kind! But the individual States are another matter. I

don't know how the States get the right to supercede national policy regarding glassware, but they have. This ain't gonna be a problem at all, as you are about to see.

Most States (more than 30) follow the Federal example and allow outright sales of glassware to anyone. Some (around 12 Ibelieve) require proof of ID and nothing more. The remaining minority of States require the person to apply for a state permit to buy glassware. My state (Texas) happens to be one of those nutty permit States.

For example, here in my home state of Texas I cannot buy glassware from a dealer within my state without a permit. The permit I need is issued by my State's Department of Public Safety (Narcotics Division). All you have to do is fill out a little form that asks for your name, address and the reason you need the glassware. Then you send it in. The people I've talked to within the Department claim it's no big deal and the worst that can happen is that they can say no. Well, that is not the truth. I knew a man who figured honesty was the best policy and applied for the Texas glassware permit. In two weeks' time, two DPS agents visited his home and grilled him hard on why he needed glassware. I mean to say they were abusive. The funny (?) thing about it was that he couldn't call the police to have them arrested. They were the police!

Now don't start freaking out on me. My state happens to be a worst case scenario. You should not expect such exuberant law enforcement in your area. Even if you do, there is a simple remedy for it:

Buy from another state! [Picture me thumping my forehead with the palm of my hand. Eyes wide. Mouth slightly agape.]

Drive to a friendly state and pick up some glassware. Better yet, call up a place in another state and order from them. There are no restrictions on interstate sales of glassware! And get this...it doesn't matter which "other state" you purchase from. Even a state with the cheesiest glassware laws.

The best proof of this is a conversation I had with a glassware maker here in Texas:

**Me**: "Yes, we would like to inquire about the price on a 24/40 distillation kit."

Tex: "Well, I'm gonna need to see a copy of your permit before I—"

Me: "I don't know what you mean by permit. Here in Delaware we—"

Tex: "Oh, you're not in Texas?"

Me: "No."

Tex: "Oh, well, that's no problem. What size flasks are you looking for?"

As I hope you can see, glassware is a whole different ball game than chemicals. But there still is some oversight. Every glass maker's sales records are open to inspection by the DEA. From conversations I've had with glassware makers, the consensus is that it is the DEA (and not State Narcotics) that does most of the patrolling. The glassware makers do not report purchases. It is not their business to do so. They tell me that it is the DEA that initiates visits and that they (the DEA) seem primarily interested in industrial-sized purchases. Things like 20,000 ml flasks and such. And that, folks, is the extent of the scrutiny. There is no legal impediment to purchasing this glassware so the best the government can do is "watch."

The manufacturers tell me that if the DEA ever bothers to show up it is usually around four times a year. A quarterly thing if you will. But that is four times too many for the glassware makers' liking. Without a doubt, I found no greater resistance to this stupid War on Drugs than I did from the glassblowers. Regardless of their personal beliefs on the legality of drugs, nearly every one of them detested the intrusion and stigma the DEA has placed on their industry. They do not like having strangers enter their

businesses without provocation and going through their files. It is especially noisome to them because they know that all they sell are pretty little vessels of glass made from boron and silicon. Believe me, the glassware makers are NOT against you!

Because there is so much hype and/or harassment, some glass makers have just stopped selling to the public. That is just a personal decision of theirs and has nothing to do with you or the law. One place told me that they had always sold to individuals until some punk in South Dakota was busted for making drugs and had, among others, their company's catalog. The man told me that the DEA then tried to intimidate his company by saying that they could be held criminally liable if they continued to knowingly sell glassware to drug makers. (I know. I know. What kind of mentality skews logic like that?) But the majority of this nation's glassware makers (most of whom I list here) continue to sell glassware ala business as usual. Do not feel any hesitation at all about purchasing from them. But to be on the safe side, feel free to adopt some of the glassware buying strategies I list next.

## GLASSWARE BUYING STRATEGIES

All of the usual bullshit applies here, but there are some neat little tricks that are best applied to glassware purchasing. Only the biggest glassware makers (Ace, Reliance, Kimble, Kontes, etc.) offer preassembled home distillation kits in nice, foam lined plastic suitcases. All others sell the components individually. Assume the latter and request individual pieces.

Almost every glassware maker listed here makes their own stuff and most have their own catalogs. But the glassware industry is an inclusive bunch and they realize that most scientists already have one of the Big Six's catalogs. So nearly all will offer the service of cross-referencing your Kontes or Ace products with their own product's numbers to facilitate a match. By all means, ask the company if you can give them a competitor's number for cross-referencing. It shows that you're a part of the science game and it gives the company you are ordering from the guilty little pleasure

that they are helping take away your business from their larger competitors.

Don't be so damn hasty in ordering your glassware. Do some nonsuspicious ordering first. Buy five 1000-ml flasks and two thermometer adaptors on your first try. What in the hell could be wrong with that? If you must, confuse the powers that be and order some piece of glassware so utterly distant from distillation (like a Snyder column or impinger) that you look like the serious researcher that you are. Request some made-to-order things like asking if a flask can be made to hold exactly 2500-ml or 3000-ml stock.

I have enjoyed talking to some of the smaller glassware shops that are essentially two or three glassblowing craftsmen. I have discovered that some of them are so unknown and/or removed from the big scene that they have little knowledge of (nor care for) the hype surrounding their industry. They are all very proud of their work and rightly so. It is incumbent upon you to recognize this. Tell them you are sick of the shoddy work done by the big glass companies and have for years preferred the work of private craftsmen. Yes, the extra money is worth the peace of mind, you might say. Another worthy suggestion is to come to an Indy with a problem that you surmise only he can fix. Say that you prefer to contact them because you need pieces that are reinforced with thicker glass at the necks and sidearms. Or say that you need flasks whose necks are 30 mm high instead of the normal 25 mm. Tell them you want spring hooks (don't ask) placed on each joint of every piece. I think that is the best and coolest request to propose. Try it! All this shows professionalism, man! And it gives these guys the challenges they like!

A really clever way to get in good with a glassware company is to NOT buy any glassware from them but rather send them some broken glassware instead! You see, almost every glassware provider does repairs. Even the places that won't sell to you will take your broken glassware for repair. Why wouldn't they? This is glassware that you already own and which they had no hand in selling to you. Not only are you demonstrating to the company that you are an entity that already has the authority to own and use

glassware, but you are also getting yourself placed directly into their customer base. You are in like sin, baby!

How do you get glassware for breaking in the first place? Just go and buy some of the ultra-legal non-distillation stuff like graduated cylinders, beakers or any complex glass items. Give 'em a smack and send 'em off. It may seem absurd to a glassware maker that someone would want to rescue common, cheap items like beakers and stuff through repair. So send them a lot of them (not necessary but it is just a suggestion) or try some hybrid strategies. Request that a beaker and cylinder be joined at the bases by a glass tube fitted with a 3-way valve in the middle. Your crazy specifications will fascinate them. No matter what crazy damage or scheme you devise, try to make it something that is at least worth doing for the glassware company. They'll think you're nuts for sending them a single 50-ml graduated cylinder with a starburst crack in it. They'll lose money just on packing and shipping the damn thing. I would suggest something that would require an outlay of at least \$100 on your part, and even then I would offer to pay for all shipping.

Oh please! Give me a break! That is nothing compared to the access and peace of mind it will give you. Your payoff will be when you send them your glassware and include a note like this one.

... Blah, blah, blah... And while you are working on our order could you please fabricate or send from stock two 24/40 Claisen adaptors, and two 3000 ml 24/40 flat-bottomed flasks. Below is our credit card number upon which we would also like to charge for next day shipment preferably using FedEx or UPS.

Or something like that. Ya know what I mean, Jellybean?!

The last major strategy is the old tried and true method of pitting one place against another. There is just no better way to rile the competitive, capitalistic being inherent in a customer service/sales rep and get them to

like you than by doing this. And the way this works for the glassware industry is exceeding simple.

As you are about to see, the center of the known glassware universe is a town called Vineland, New Jersey. The town is lousy with literally hundreds of scientific and specialty glassware companies. It's glassware heaven, folks! So the first thing I do is call a company that is NOT in Vineland, N.J. And the first words out of my mouth are the statement: "Hello. I have your company listed as a scientific glassware maker. And since I notice you're NOT in Vineland, N.J., I figured I would give your company a call first."

Man, I cannot begin to explain to you how warmly I was treated after making that distinction! And the same strategy works for companies in Vineland but with a different twist: "We're used to getting good glassware from Vineland but those giant manufacturers down the street from you just can't give the kind of customer satisfaction you little guys can!" or "Damn. I would be scared to death to open up shop in the middle of such competition. Your products must be excellent!"

Glassware, chemicals, used cars, bricks and computers. They are all commodities and services, and are sold by the same human beings who are subject to the same feelings and expectations. The solutions are so simple and ancient. Be polite, kind of assertive and knowledgeable. By all means, laugh and be conversational. Compliment the company and their products. Now go and get your glassware!

## GLASSWARE COMPANIES

All of the companies listed here have been interviewed by me and sell to individuals regardless if the individual is affiliated with a company or not.

## Ace Glass, Inc.

Vineland, NJ 08360

TEL: 609-692-3333, Ext. 87

■ Comments: One of the top 5 big guys and they sell to anyone (as any business should). Definitely ask for their catalogues. They are a full service glassware company.

## Adams & Chittenden Scientific Glass

2741 Eighth Street Berkeley (?), CA 94710

TEL: 510-843-5277 FAX: 510-843-5290

URL: www.adamschittenden.com
■ Comments: Two guys that make

glassware.

# Adria Scientific Glass Works Co., Inc.

Geneva, OH 44041 TEL: 440-474-6691 FAX: 216-474-5362

■ Comments: No credit cards accepted. Takes money orders etc.
Sounds like a purist with a German accent. All pieces handblown.

#### Allen Scientific Glass, Inc.

Boulder, CO 80301-2702 TEL: 303-442-2141 FAX: 303-442-2260

■ Comments: V/MC, \$25 min. order. Nice lady I talked to. They make their own and also distribute for others. They will make a distillation kit for you no sweat. But they sell it in pieces and do not have those little handy suitcases for them.

## Alpha Scientific Glassblowing

5227 Leetsdale Drive Denver, CO 80222 TEL: 303-322-5051

■ Comments: Open to the public.

## American Scientific Glass, Inc.

Memphis, TN

TEL: 901-362-8308

■ Comments: A full service lab store that sells everything to an individual except chems. Don't push him on the chems. Will "send chems only to a business address."

#### **AMKGlass**

Vineland, NJ

TEL: 609-692-1488 FAX: 609-691-5084

■ Comments: Very nice, "family-run" business. Wants to give the big boys a run for their money. Full line of

glassware to the public.

## Arrow Glass Co.

South Vineland, NJ 08360

TEL: 609-691-1350 FAX: 609-794-8688

■ Comments: Custom makes anything. Prefers cash/money order to credit cards. Sells to the public.

#### **Atmar Glass**

Pennsylvania

TEL: 610-444-5903 FAX: 610-444-5903

■ Comments: Ask for Victor or Steve. Are a little hesitant but will assemble or make from scratch for an ind.

## **Bandorf Glass Company**

25327 Avenue Stanford Valencia, CA 91355 TEL: 805-298-0061 FAX: 805-298-2214

■ Comments: Makes condensors and stopcocks, but can order other things for you. Middle eastern sounding man.

#### Belico Glass Inc.

340 Edrudo Road Vineland, NJ 08360 TEL: 609-691-1075 FAX: 609-691-3247

## **Bio-Rad Laboratories Inc.**

Hercules, CA 04547 TEL: 510-741-1000

■ Comments: Used to sell a lot of glassware but is rapidly discontinuing most of them.

## Blaessig Glass Specialties, Inc.

Rochester, NY 14609-7421

TEL: 716-288-7078

■ Comments: Graduated cylinders and most regular items. Also makes glass imprints on beer mugs.

## Cal-Glass for Research, Inc.

Costa Mesa, CA 92626-3032

TEL: 714-546-7250 FAX: 714-755-7800

■ Comments: Craftsmen. Need to talk to them. Chew the fat. Shouldn't be no problem.

## **Cambridge Scientific**

Miami, FL 33166 TEL: 305-885-5900 FAX: 305-888-2011

■ Comments: Complete line of brand name and non-brand name laboratory equipment, accessories, reagents and supplies. Serving domestic and overseas industry and institutional research.

#### **C&D Glass**

1016 Columbia Avenue Millville, NJ 08332

TEL: 609-825-0170

#### Char-Dan Glass

951 Union Street Dividing Creek, NJ 08315 TEL: 609-785-1518

#### Chatas Glass Co.

Vineland, NJ 08360 TEL: 609-691-5600 FAX: 609-794-8688 ■ Comments: Will sell but in great quantities. Greg (the plant manager) was really easygoing. Says to call him back anytime I needed some advice.

#### Chemglass

Vineland, NJ

TOLL-FREE: 1-800-843-1794
■ Comments: Only sells to businesses but sounds easy to convince.
(So why the hell did I include this place here?)

#### Corning

TEL: 607-974-900

Comments: You know the name.

You call 'em. I didn't.

#### cosco

TOLL FREE: 1-800-772-6726

FAX: 303-777-3331

■ Comments: General Lab supply for chemists. Also sells some plasticware. Super nice.

#### **Custom Glassblowing**

8812 Beulah Church Road Louisville, KY 40210

TEL: 502-239-1732

#### Dawn Scientific

Newark, NJ 07114-2790 TEL: 973-802-1006 FAX: 973-802-1006

■ Comments: Is also listed in the Laboratory Supply section of this book. An excellent source for all science needs. Especially glassware. Says export to any country is no problem. Very, very nice and competent man running this business.

#### **Dependable Scientific Glass**

2212 South West Temple #11 Salt Lake City, UT 84115

TEL: 801-484-3021 FAX: 801-484-3066

## Exeter Scientific Glass Company

231 Old Tulpehocken Road Birdsboro, PA 19508 TEL: 610-582-2210

#### Fresno Scientific Glass

4535 North Bendel Avenue #103

Fresno, CA 93722 TEL: 209-275-1881 FAX: 209-275-1609

■ Comments: Will make anything to order. Sells anything retail or whole-

sale. Nice man.

## **Galaxy Glass**

Newfield, NJ

TOLL FREE: 1-800-361-5894

FAX: 609-697-1756

■ Comments: Custom lab glass.

Open sales.

## General Glassblowing Co.

CA

TEL: 510-323-9172

#### **Glass Instruments**

CA

TEL: 213-681-0011 FAX: 626-792-7959

■ Comments: Custom glassblowing. Very friendly. Says it would take anywhere from 10-14 days to make a

distillation kit.

## **Glass Tech Supplies**

1220-A Simon Circle

Anaheim, CA

TEL: 714-630-0483 FAX: 714-630-1176

URL: www.glasstech-supplies.com

#### Greatglas

Wilmington, DE 19808 TEL: 302-998-4400 FAX: 302-994-6793

URL: www.greatglas.com
■ Comments: Trusts ya. Very eager
to sell and proud of their work. 5 vet-

eran glassblowers.

### Hammet Scientific Glass Co.

825 Edgefield Road North Augusta, SC 29841 TEL: 803-279-6591

#### Hazelglas

Cincinnati, OH 45212 TEL: 513-631-6789 FAX: 513-351-6363

#### **Hess Glass Products**

601-North Orchard Road Vineland, NJ 08360 TEL: 609-691-1432

#### HGF

Stafford, TX

TEL: 281-568-9835 FAX: 281-568-9862

TOLL FREE: 1-800-568-9835

■ Comments: Full line of glassware. Will sell to any individual except in TX. Also confided that they keep all purchases on file for inspection.

## High Technology Scientific Glass Laboratory

1807 North Elm Street Denton, TX 76201 TEL: 940-898-0443

#### **Houde Glass Co**

Newark, NJ 07104 TEL: 973-485-1761 FAX: 973-485-1761

■ Comments: Will make what you specify. Has some lab equipment too.

#### Industrial Glassware

Houston, TX

TEL: 713-680-3950 FAX: 901-794-2885

■ Comments: Will sell to anyone

outside of TX.

#### **Industrial Glassware**

130 Bogden Boulevard Millville, NJ 08332 TEL: 609-327-2688

## **Industrial Research Glassware**

105 Clover Hill Drive Flanders, Nj 07836 TEL: 973-584-2019

#### **International Glass Work**

723 East Park Avenue Vineland, NJ 08360 TEL: 609-691-5628

#### ISPG

New Milford, CT 06776-2002

TEL: 860-355-8511 FAX: 860-355-8533

■ Comments: Won't sell to individuals but a company letterhead will do.

#### **Kimble**

Vineland, NJ

TEL: 609-692-0824

■ Comments: Second biggest glassware maker in the world. Call em if

you want. I didn't.

#### **Krest Glass Inc.**

7 Royal Circle

Newburgh, NY 12550-2437

TEL: 914-564-5422 FAX: 914-564-9016

■ Comments: Sells to Individuals. Made-to-order custom glassware.

#### Lab Glass

Vineland, NJ 09360

TOLL FREE: 1-800-220-2164
toll free FAX: 1-800-220-5193
■ Comments: Complete manufacturer of standard and custom laboratory glassware. Sells to the public.

### **Lab Glass**

1172 North West Boulevard Vineland, NJ 08360

TEL: 609-691-3200

TOLL FREE: 1-800-220-5171
■ Comments: Big, beautiful catalogue with all the glassware and lab equipment you want. Definitely sells

to the public.

#### Laboratory Glass Inc.

3567 Wesley Road Kingsport, TN 38118 TEL: 901-362-8308

# Laboratory Glass Apparatus, Inc.

Berkeley, CA 94710 TEL: 510-527-0330 FAX: 510-527-0331

■ Comments: Looks good, friendly. Understands the "uniqueness" of the Berkley area and the "customers" therein. Been in business 33 years. Knows the California laws but will sell to an individual as long as the individual seems legit and non-squirrelly. Is aware of no need for a permit to purchase glassware in CA.

#### LaPine Scientific Co.

Blue Island, IL 60406-0780

TEL: 708-388-4030 FAX: 708-388-4084

#### Lurex

Vineland, NJ 08360 TEL: 609-692-5600 FAX: 609-692-7011

■ Comments: Scientific glassware and supplies. Says their full catalogue is open to all customers. No hesitation about that point at all.

## Metro Scientific, Inc

Farmingdale, NY 11835 TEL: 516-293-9656 FAX: 516-293-8549

■ Comments: No credit cards accepted. Use either prepaid or COD. Sells everything but chemicals to individuals. I have a feeling they won't sell to NY residents.

#### **Montclare Scientific Glass**

IL

TEL: 847-255-6870 FAX: 847-255-6971

■ Comments: Made to order.

#### Palmetto Scientific Glass Co.

1510 Atomic Road

North Augusta, SC 29841

TEL: 803-279-7668 FAX: 803-279-9485

## PCI Scientific Supply, Inc.

Fairfield, NJ 06004

TOLL FREE: 800-432-4136

FAX: 083-244-9448

■ Comments: Complete line of laboratory glassware. Can get anything form all companies including VWR and Fisher. Knows about the liabilities but will still sell to individuals.

#### Pfeiffer Glass Inc.

140 Bennington Drive Rochester, NY 14616 TEL: 716-865-1290 FAX: 716-865-1303

## Pope Scientific, Inc.

Menomonee Falls, WI 53052

TEL: 414-251-9300 FAX: 414-251-7387

■ Comments: A custom glassblower of scientific glass. Says he will make a distillation set for you if you FAX him a wish list. Ask for John Oxendorf.

#### Precision Glass Products Co.

Oreland, PA 19075

TOLL FREE: 1-800-682-6163

FAX: 215-885-2792

## **Precision Glassblowing**

14755 East Hinsdale Avenue Englewood, CO 80112

TEL: 303-693-7329 FAX: 303-699-6815

■ Comments: Says they usually only sell to businesses because the "Tax ID" they supply helps them with their taxes. But says he'll work something out with you if you're having problems.

## Q Glass Co., Inc.

Towaco, NJ 06082

TOLL FREE: 1-800-619-0069

FAX: 973-335-2057

■ Comments: Was told they are a very competitive company and their catalogue proves it. They are obviously trying to become a major player and offer a full line of glassware as well as heating, stirring and other laboratory equipment. Prices are average.

## **Quark Enterprises, Inc.**

Vineland, NJ 08360

TOLL FREE: 1-800-462-7062 toll free FAX: 1-800-462-7063

■ Comments: Excellent products at low prices. Typically 40% below what others charge. They sell to "college students" and offer special student kits if desired.

## Ramin Corp.

Magnolia, TX 773355-1801

TEL: 281-356-5178 FAX: 281-356-4624

■ Comments: Very friendly but may need some bullshitting on your part.

## Reading Scientific Co, Inc.

Reading, PA 19604 TEL: 610-921-0221 FAX: 610-921-9771

■ Comments: This company can also be found in the Laboratory Supply section of this book. They sell everything and are very big on selling glassware. Of course they sell to individuals.

#### Reliance Glass Works, Inc.

Bensenville, IL 60106-0825

TEL: 630-766-1816 FAX: 630-766-0147

TOLL FREE: 1-800-323-3334

Comments: One of the top 5 in

glassware. Very comprehensive catalogue including heating mantles and

other equipment. Very competitive prices. All sales from the public welcome.

## Research Glass of NJ, Inc.

Vineland, NJ 08360 TOLL FREE: 800-515-6077

FAX: 609-696-3167

■ Comments: They tell me they make mostly specialty glass products but will of course custom make simple things if you FAX them a drawing or some specs.

## Research Triangle Glass, Inc.

11020 Chapel Hill Road Morrisville, NC 27560 TEL: 919-467-7233

#### **Roth Glass**

Pittsburg, PA 15220-5538

TEL: 412-921-2095 FAX: 412-921-8003

■ Comments: Will custom make if asked but are more exclusively into

repairs or modifications.

## Sales, W.A., Ltd.

Wheeling, IL 60090 TEL: 815-254-1300 FAX: 815-254-1302

■ Comments: Will export anywhere as well as domestically. No credit cards accepted. COD or money order. Custom maker.

#### Scientific Glass & Instruments

2521 Fairway Park Drive #404

Houston, TX 77092 TEL: 713-682-1481 FAX: 713-682-3054

## Scientific Equipment Co.

Aston, PA 19014 TEL: 610-358-2855 FAX: 610-558-1475

■ Comments: Same place as is listed in the Laboratory Supply section of this book. They sell everything

to individual without question. Has an extensive line of glassware. V/MC accepted.

#### SG & P. Inc.

Freeport, TX 77541 TEL: 409-233-0371 FAX: 409-233-0371

■ Comments: Will sell to anyone except individuals in Texas. Sounded flustered about the TX restriction and wasn't sure about the technicalities of it. Wished it wasn't so.

## Southern Lab Apparatus

North Augusta, SC

TOLL FREE: 800-682-1267

■ Comments: Great prices! Definitely sells to the public. Very nice

lady I talked to.

## Stanford Glass Blowing

Palo Alto, CA 94303 TEL: 650-494-2255 FAX: 650-494-0458

■ Comments: Makes everything themselves. Sells/makes anything to

the public.

#### Tech Glass Co., Inc.

Vineland, NJ 08360-2743 TEL: 609-691-7839 FAX: 609-696-4269

■ Comments: Full line of glass products. Prefers to sell to businesses.

Prefers to sell bulk either thru distributors such as Fisher or VWR.

#### **Technical Glass Products**

TOLL FREE: 1-800-322-8716
■ Comments: All custom made.

#### Toe-Pre Glass Blowing

Houston, TX 77011-4516 TEL: 713-923-1008 FAX: 713-923-1013

■ Comments: Will make you any-

thing. No V/MC.

#### Tudor Scientific Glass Co., Inc.

555 Edgefield Road Belvedere, SC 29841 TEL: 803-279-4666

FAX: 803-279-4690

■ Comments: V/MC, \$25 min. order. They make their own glassware but will sell others' as well. Been there

since 1956.

## **Variety Glass**

201 Foster Avenue Cambridge, OH 43725 TEL: 614-432-3643

#### **V M Glass**

3231 North Mill Road Vineland, NJ 08360 TEL: 609-794-9333

## Widget Scientific Inc.

2063 Dallas Drive Baton Rouge, LA 70806

TEL: 504-928-1325 FAX: 504-925-0402

■ Comments: Just give 'em a description of a competitors # and

they'll get it for you.

## **FOREIGN SOURCES**

## **AGB Scientific Apparatus Ltd.**

The Medical Centre
Unit 3
Kilroot Park
CARRICKFERGUS
County Antrim BT38 7PR

IRELAND

TEL: (44) 19603-51532 FAX: (44) 19603-51302

## **Beijing Glass Group Company**

74 Tian Tan Dong Lu Road Chong Wen District Beijing 100062 CHINA

TEL: (86) 10-6713-1984 FAX: (86) 10-6711-8089

URL: http://pages.prodigy.com/ labglass

■ Comments: Lots of cheap (in more ways than one I'm sure) Chinese glassware. Be prepared to buy in

semi bulk amounts.

# **Essential Oil Components**

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## INTRODUCTION

Complex organic compounds are not merely the product of laboratory synthesis. Nature provides innumerable sources of organics as precursors for research in the form of plants and their oils. Yes, these compounds can be bought in high purity from commercial chemical companies, but why pay the exorbitant price and become part of a list when one could find them elsewhere.

I may or may not have once glossed over some general sources of certain compounds, satisfied that was good enough. Well, it's not. Not anymore. I have scoured the globe and the literature to provide for you the ultimate source list for utile plant compounds and the essential oils they come from. You will find here new sources you never knew existed, detailed component breakdowns of the oils, and some very interesting and useful species variations that may occur from country to country or even region to region.

For the purposes of this book I am going to concentrate on the sources of the more reactive species of plant compounds like allylbenzenes and phenyl species. It is understandable that reactive compounds are more amenable to change and are therefore more useful to the researcher. And although there are many plants that contain a certain amount of a particular compound, they are not included here if the amount is less than 1% of the total oil.

## ALLYLPYROCATECHOL

**Betel Leaf Oil:** (*Piper betle* L) There's a lot of different betel species in the tropics. The oil from the Philippines has 2.38% allylpyrocatechol [11].

## ANETHOLE

Anethole is a propenylbenzene and exists in both the *trans* and *cis* isomers. Every source for anethole contains both isomers but the ratio is about 97:3 in favor of the *trans* isomer. Lucky you.

**Anise Seed Oil:** (*Pimpinella anisum*) There are consistently high concentrations of anethole in anise seed no matter where the oil comes from. In case you don't believe me you can check out the sources below:

| Turkish 94.73  | Canadian 57.4  |
|----------------|----------------|
| Russian        | Spanish 95.2   |
| Egyptian 88.6  | Hungarian 97.4 |
| Bulgarian 87.3 |                |

That's a nice payload from the seed. But don't go throwin' away the rest of the plant! Take a look at all the anethole percentages in the oils from different parts of the anise plant in Table I [2, vol. III, p. 214].

TABLE I. Comparative Anethole Content of Various
Parts of the Anise Plant

|                     |     | trans-    |
|---------------------|-----|-----------|
| Part of Plant       |     | Anethole  |
| young roots         | (S) | 6.0-37.9  |
|                     | (H) | 5.6-11.0  |
| cotyledons          | (S) | 62.6      |
|                     | (H) | 47.1      |
| leaves              | (S) | 63.6-89.1 |
|                     | (H) | 6.4-63.5  |
| stems               | (S) | 83.9-88.7 |
|                     | (H) | 66.4-84.7 |
| umbels with buds    | (S) | 79.7      |
|                     | (H) | 75.5      |
| umbels with flowers | (S) | 87.5      |
|                     | (H) | 86        |
| small fruit         | (S) | 95.2      |
|                     | (H) | 97.4      |
|                     |     |           |

[Note: (S)=Spanish origin, (H)=Hungarian origin]

**Dill Seed Oil:** (*Anethum sowa*) It has been reported that the Indian species of dill oil has 1.0% anethole [12]

**Carrot Seed Oil:** Steam distilled carrot seeds afford an oil with approximately 2.33% *trans*-anethole [13]

**Coriander:** In 1986, Dogan et. al. did a region by region study of Turkish coriander oils. Most were insubstantial as far as anethole was concerned, but the region of Izmic had an oil with 3.69% anethole and the region of Burdur had an oil with 5.27% anethole content. [14].

**Fennel Oil:** (*Foeniculum vulgare*) How nice! Our old friend fennel again. As Table II shows, fennel from all over the world is packed with anethole [2, vol. IV, p. 48]. See also Table XIX. in the Methyl Chavicol section.

TABLE II. Comparative Chemical Composition of Bitter and Sweet Fennel Oils of Different Origins

|                    | Bitter | Fennel | Oils  | Sweet | Fennel | Oils  |
|--------------------|--------|--------|-------|-------|--------|-------|
| Compound           | 1      | 2      | 3     | 4     | 5      | 6     |
| a-pinene           | 0.8    | 1      | 0.9   | 1.2   | 0.8    | 2.1   |
| camphene           | 0.1    | 0.3    | 0.3   | 0.3   | 0.2    | 0.3   |
| B-pinene + myrcene | 0.8    | 0.7    | 0.6   | 2.6   | 0.9    | 1.2   |
| a-phellandrene     | 0.2    | 0.2    | 0.2   | 0.8   | 0.4    | 0.4   |
| limonene           | 5.1    | 7.8    | 6.8   | 2.3   | 1.4    | 1.9   |
| p-cymene           | 0.3    | 0.5    | 1.1   | 0.3   | 0.2    | 0.3   |
| fenchone           | 7.6    | 13.2   | 7.7   | 13.8  | 6.8    | 13.5  |
| methyl chavicol    | 3.1    | 4      | 3.5   | 12.5  | 11.8   | 11.1  |
| cis-anethole       | trace  | trace  | trace | trace | trace  | trace |
| trans-anethole     | 81.7   | 71.6   | 75    | 62.5  | 76.5   | 68.1  |

[Note: 1=S. Italy, 2=India, 3=China, 4=Spain, 5=Argentina, 6=Czechoslovakia]

Betel Leaf Oil: Yup, another crazy betel plant with magical properties. Seems like this betel plant has quite a few varieties with very interesting oil constituents. Anethole, as it so happens, is included. In 1990, Rawat, et al did an analysis of the oils from five different Indian "cultivars" (a "cultivar" is a local name given to a plant even though it is the same species as any other or is the name of the grower or region) [15]. Lawrence provided a nice compilation of the data in Table III which will also give you a little peek into some of the other components in betel oils [2, vol. V, p. 92].

TABLE III. Comparative Chemical Composition of Various Indian Betel Leaf Oils

|                    |        |          | Cultivar Oi | I      |                |
|--------------------|--------|----------|-------------|--------|----------------|
| Compound           | Bangla | Desawari | Kapoori     | Meetha | Sanchi         |
| a-pinene           | _      | 0.37     | 0.05        | t      | 0.1            |
| B-pinene           | -      | t        | t           | t      | t              |
| 1,8-cineole        | _      | 1.55     | 5.75        | _      | (2 <u>-1</u> 2 |
| camphene           | _      | t        | 1.26        | _      | _              |
| p-cymene           | 0.02   | 2.47     | 1.76        | _      | _              |
| methyl chavicol    | _      | 1.55     | 0.8         | 0.19   | _              |
| a-terpineol        | 0.02   | t        | 0.66        | 0.23   | t              |
| a-terpinyl acetate | 0.06   | 44.93    | 21.98       | 15.61  | 37.95          |
| eugenol            | 82     | 26.65    | 15.93       | 18.9   | 24.5           |
| methyl eugenol     | 4.1    | 0.37     | 1.65        | 0.09   | 0.58           |
| (E)-anethole       | _      | 9.17     | _           | 32.3   | _              |
| B-caryophyllene    | 0.63   | 0.09     | t           | t      | 1.02           |

**Star Anise Oil:** (*Illicium verum*) No, this is not "anise." It is "star anise" and is a totally different plant which is mostly indigenous to Vietnam and China. In Table IV is a comparative study of commercial Star Anise oils [16].

Table IV. Comparative Chemical Composition of Star Anise Oils

| Compound          | Vietnam | China |
|-------------------|---------|-------|
| alpha-pinene      | 0.62    | 2.07  |
| beta-pinene       | 0.05    | 0.22  |
| sabiene           | _       | 0.24  |
| delta-3-carene    | 0.24    | 0.93  |
| myrene            | 0.08    | 0.4   |
| beta-phelladrene  | 0.44    | 0.48  |
| gamma-terpinene   | _       | 0.15  |
| limonene          | 0.68    | 10.44 |
| beta-phellandrene | 0.42    | 1.67  |
| alpha-terpinene   | _       | 0.14  |
| p-cymene          | 0.11    | 0.2   |
| terpinolene       | _       | 0.15  |
| linalool          | 2.34    | 1.03  |
| caryophyllene     | 0.46    | 0.38  |
| methyl chavicol   | 6.65    | 0.56  |
| alpha-terpineol   | 0.2     | 0.23  |
| cis-anethole      | 0.39    | 0.11  |
| trans-anethole    | 86.06   | 79.93 |
| anisaldehyde      | 0.62    | 0.38  |

**Tarragon Oil:** Well, not every tarragon oil, just the one from a species in Russia called *Artemisia dracunculus* subsp. *turkestanica* which has an anethole content of 10% [17]

#### ANISALDEHYDE

A promising benzaldehyde but not a lot of promising sources.

**Anise Oil:** I could only find two sources of this oil that had anisaldehyde: Russian anise oil with 2.0% anisaldehyde, and Egyptian anise oil with 2.5% anisaldehyde.

**Cumin Oil:** One source from Turkey (*Cuminum cyminum*) was found to have 2.79% anisaldehyde.

**Fennel Oil:** Not the oil from the plant but from the seeds, and not from every fennel source. Russian fennel seed has been found to have 2.4% anisaldehyde, and Pakistan has 1.8%. There are too many intangibles to mention, but I have seen a trend that leads me to believe that quite a few, if not most, origins of fennel should have some anisaldehyde in their seed oils.

**Star Anise Oil:** You can look at Table IV to see that Chinese Star Anise has a smidgen anisaldehyde. More recently it was shown that the oil specifically from the Yunnan region of China had a whopping 4.48% content [18].

### APIOLE

What did I say this thing came from? Parsley? Well, sure. But, I had no idea how varied the Apiole content can get in this species. And I was pleasantly surprised to find Apiole in other oils as well. Check it out:

**Celery Oil:** (*Apium graveolens*) The leaves of supermarket celery have 23% apiole [72]. Wow!

**Cubeb Oil**: Steam distillation of the dried fruit of the Japanese species of Piper Cubeba afforded a 1.3% concentration [1]

Parsley Oils (Petroselinum crispum): There are two commercially available forms of parsley oil: seed oil and herb oil. Both are commonplace in any aromatherapy or flavor and fragrance company catalog. Parsley seed oil is from the seed or "fruit" of the plant. Parsley herb oil is the oil from the entire above-ground portion of the plant. I ain't sure if the roots are ever included. It is also possible to have oil isolated only from the leaves. As you are about to see, our tasty little garnish is a carrier of the who's who of the allylbenzene world. In 1981 Lawrence examined two commercial samples of parsley seed and herboils. The apiole content was found to be 15.5% and 0.3% respectively. [2, vol. III, p. 27]. In 1983 Clark and Menary found a 7.48% apiole concentration in plain leaf parsley from Tasmania [3]. In Table V you can see a good representation of the organic components of parsley herb, seed and leaf oils. The herb and seed oil data is from Shaath, et al. [4] and was taken from Egyptian samples. The leaf oil column data was fused into the table from a separate study done by MacLeod, et al. using 2-methylbutane to extract the leaves of parsley found in a local market in Libya [5]

TABLE V. Comparative Chemical Composition of Parsley Herb, Seed and Leaf

| Compound                           | Herb Oil | Seed Oil | Leaf Oil |
|------------------------------------|----------|----------|----------|
| a-thujene                          | 0.09     | 0.19     | 0.1      |
| a-pinene                           | 6.57     | 16.84    | 5.1      |
| camphene                           | 0.06     | 0.11     | 0.2      |
| sabinene                           | 0.32     | 0.31     | 0.3      |
| B-pinene                           | 4.23     | 10.78    | 1.8      |
| myrcene                            | 21.23    | 0.73     | 4.3      |
| ?-3-carene                         | 0.03     |          | 0.2      |
| a-phellandrene                     | 1.37     | 0.02     | 0.7      |
| a-terpinene                        | 0.04     | 0.03     | trace    |
| p-cymene                           | 0.22     | 0.55     | 1.4      |
| limonene                           | 7.79     | 6.57     | 3.6      |
| B-phellandrene                     | 14.66    | 0.65     | 12.4     |
| cis-ocimene                        | 0.02     | 0.56     | trace    |
| trans-ocimene                      | 0.07     | 0.02     | 0.1      |
| t-terpinene                        | 0.31     | 0.44     | 0.4      |
| a-p-dimethylstyrene                | 1.6      | 0.18     | 7.2      |
| terpinolene                        | 1.95     | 0.05     | 2.1      |
| p-metha-1,3,8-triene               | 24.64    | 0.03     | 9.2      |
| pentylbenzene                      | trace    | 0.06     | _        |
| cryptone                           | trace    | trace    | 0.1      |
| p-methatriene isomer               | 0.06     | _        | _        |
| p-methatrienol isomer              | 0.13     | _        | _        |
| terpinen-4-ol                      | -        | 0.07     | _        |
| a-terpineol                        |          | 0.12     | 1.7      |
| cis-dihyrocarveol                  | 0.14     | _        |          |
| trans-dihyrdocarveol               | 0.03     |          |          |
| carvone                            | -        | 0.03     | _        |
| a-terpinyl acetate                 | 0.03     | 0.03     | _        |
| a-copaene                          | 0.07     |          |          |
| B-bourbonene                       | 0.02     | _        |          |
| B-elemene                          | trace    | _        | 0.1      |
| B-caryophyllene                    | 0.14     | 0.09     | 0.4      |
| trans-B-farnesene                  | 0.15     | 0.1      | 0.4      |
| ar-curcumene                       | 0.13     | 0.02     |          |
| germacrene D                       | 0.25     | 0.02     |          |
| B-selinene                         | 0.09     |          |          |
| a-selinene                         | 0.03     | trace    |          |
| myristicin                         | 6.32     | 13.27    | 20.6     |
| B-sesquiphellandrene               | 0.32     | 10.27    | trace    |
| elemicin                           | 0.24     | 4.61     | 0.3      |
| caryophyllene oxide                |          | 0.05     | 0.4      |
| 2,3,4,5-tetramethoxy allyl benzene |          | 0.68     | - 0.4    |
| caratol                            | <u> </u> | 0.14     |          |
| butyl phthalide                    | 0.03     | 0.14     | _        |
| apiole                             | 0.03     | 36.3     | 18.3     |
| sedanenolide                       | 0.32     | 0.12     | -        |
| sedanolide                         | 0.33     | 2.84     |          |
| Diels-Alder aducts                 | 3-4.0    | 2.04     |          |
| Dieis-Midel addicis                | 3-4.0    |          |          |

It is interesting to note that Shaath also analyzed five other shipments of parsley seed oil and found apiole contents of 7.71-10.56% but the origins of the shipments were not given.

The following tables should tell you all that your brain ever need know about parsley oils and their apiole contents. (Yeesh! Am I obsessed or what?!) Table VI is a more recent study (1988) and is a good comparison to what is presented in Table V [6]. The geographical sources for the oils in Table VI were not given. Table VII shows the major component content from leaves of some of the more novel global parsley sources [7]. Finally, Porter did a comparative chemical composition study of the oils obtained from the leaves of the two major parsley types: curly leaf and flat leaf [8]. These were taken from various commercial suppliers and the data can be seen in Table VIII.

TABLE VI. Another Comparative Chemical Composition of Various Parsley Oils

| Component                           | Parsley<br>Leaf Oil | Parsley<br>Herb Oil | Parsley<br>Seed Oil |
|-------------------------------------|---------------------|---------------------|---------------------|
| a-pinene                            | 4.56                | 5.61                |                     |
| B-pinene                            | 2.6                 | 3.48                |                     |
| myrcene                             | 6.08                | 5.7                 | _                   |
| limonene                            | 6.27                | 5.92                | 0.2                 |
| terpinen-4-ol                       | 0.18                | 0.17                | _                   |
| myristicin                          | 1.66                | 4.77                | 56.6                |
| isomyristicin                       |                     | _                   | 2.42                |
| dillapiole                          |                     | 1.24                | 18.76               |
| apiole                              | 0.07                | 1.66                | 17.07               |
| 2,3,4,5-tetra-methoxy allyl benzene | 30.05               | 25.94               | NA                  |

TABLE VII. Comparative Chemical Composition of Parsley Seed Oils From Various Geological Locations

| Compound                        | 1 (a) | 2    | 3    | 4     | 5    | 6    | 7    |
|---------------------------------|-------|------|------|-------|------|------|------|
| a-pinene                        | 1.5   | 2.3  | 0.7  | 1.1 . | 0.1  | 0.4  | 0.6  |
| B-pinene                        | 1     | 1.6  | 0.4  | 0.8   |      | 0.2  | 0.5  |
| myrcene                         | 16.3  | 9.7  | 8.7  | 10.4  | 2.8  | 3    | 2.9  |
| a-phellandrene                  | 1.8   | 1.1  | 1.1  | 0.8   | 0.3  | 0.5  | 0.9  |
| B-phellandrene                  | 29.8  | 12.1 | 13.1 | 8     | 6.2  | 8.7  | 9.7  |
| t-terpinene                     | 0.9   | 0.1  | 0.1  | 0.1   | _    | 0.7  | 0.2  |
| terpinolene + a-dimethylatyrene | 2.5   | 2.9  | 3.5  | 13.9  | 2.1  | 3.1  | 5.4  |
| p-mentha-1,3,8-triene           | 42.1  | 62.8 | 54.1 | 44    | 20.1 | 29.3 | 64.7 |
| thymol                          | _     | _    | _    | 2     | _    | -    | -    |
| MW 168 (b)                      | _     | _    | _    | 1.8   | -    | _    | _    |
| MW 168 (b)                      | _     | _    | _    | 2.8   | _    | _    | _    |
| myristicin                      | 1     | _    | 12.2 | 1.5   | 60.5 | 2.3  | 0.2  |
| apiole                          | _     | _    | _    | _     | 1.4  | 22.1 | -    |
| MW 268 isomers (c)              | 1.8   | 4.6  | 4.7  | 4.7   | 2.4  | 7.9  | 10.9 |

[Note: Samples 1-3 and 6=Turkey, 4=Saudi Arabia, 5=Yugoslavia, and 7=Iran]

TABLE VIII. Comparative Chemical Composition of the Leaf Oils of both Curly and Flat Leaf Parsleys

| Compound                         | Curly Leaf oils | Flat Leaf Oils |
|----------------------------------|-----------------|----------------|
| a-pinene                         | 0.2 - 8.3       | 0.3 - 11.2     |
| B-pinene                         | 0.2 - 7.2       | 0.5 - 10.2     |
| myrcene                          | 0.7 - 3.7       | 1.5 - 3.8      |
| a-phellandrene                   | 0.4 - 1.2       | <0.1 - 0.8     |
| B-phellandrene                   | 3.9 - 16.3      | 4.8 - 13.1     |
| y-terpinene                      | 0.1 - 1.3       | 0.1 - 0.3      |
| p-cymene                         | 0.1 - 0.5       | 0.1 - 0.3      |
| a-p-demethylstyrene              | 2.0 - 13.1      | 3.0 - 6.4      |
| p-mentha-1,3,8-triene            | 11.0 - 57.9     | 5.7 - 39.5     |
| 2,3,4,5-tetramethoxyallylbenzene | 0.6 - 15.0      | 0.5 - 2.0      |
| myristicin                       | 6.7 - 32.9      | 15.4 - 54.3    |
| apiole                           | 6.4 - 18.2      | 0.5 - 6.9      |

The most recent articles of note come from the compilations given in the excellent series "Essential Oils" by Brian M. Lawrence. He writes that Korean parsley is virtually devoid of apiole [2, vol. IV, p. 178-179]. Italian parsley was reported as having 5% apiole content and that German parsley samples had an average content of around 2% [2, vol. V, p. 151-153].

Whew! That's a lot of sources with the apiole content going all over the place. So why couldn't I just have said that parsley had apiole in it and drop the subject there? Well, you're gonna see later on in this book how this sourcing and knowledge will be indispensable in getting these products.

And yes, I can feel the weight of your stare on all of those other goodies you are seeing in the parsley tables. We will be getting to them shortly (tee hee!).

**Dill Oil:** (Anethum sowa) Anethum sowa is the name for the Indian species of dill which was shown to have an apiole content of 5.7% [9]. The more common variety of dill is known as Anethum Graveolens and its apiole content is usually much less. The European varieties seem to contain almost zilch but has been demonstrated that if young dill plants are used then the apiole content can approach 4%.

Fennel Oil: Fennel is known for a lot of things but apiole ain't one of them. That is, until some dudes decided to test the roots of the plant [10]. Any good Italian will tell ya that the fennel bulb and feathery green leaves and stalks are where it's at (kinda looks like celery. . . kinda). But look at what these guys found in the spindly little roots of the plant (the part that, alas, gets thrown away) as shown in Table IX [2, vol. V, p.133]:

TABLE IX. Comparative Chemical Composition of Fennel Root Oils.

|                        | Seedling | Mature plant |
|------------------------|----------|--------------|
| Compound               | root oil | root oil     |
| limonene               | 19.2     | 3.1          |
| terpinoline            | 0.7      | 36           |
| other monoterpene HC   | 4.6      | 3.9          |
| a- + B-fenchyl acetate | 1.8      | 1.4          |
| methyl chavicol        | 0.4      | _            |
| (E)-anethole           | 10.6     | 0.8          |
| myristicin             | 1.2      | 24.7         |
| dillaiole              | 10.8     | 5.3          |
| apiole                 | 48.2     | 22.9         |

#### ASARONE

Calamus Oil: (Acorus calamus): An Indian water plant whose roots supply the oil, which has an average of 80% asarone. In 1969, the FDA ruled that asarone was carcinogenic so it was banned for all food uses. Since then, sources for this oil have sometimes looked to alternative origins other than India. Lots of holistic companies prefer to use the calamus oil from Europe and Russia because they contain almost no asarone. I think it's fraudulent to pass off asarone-free calamus oil as the real thing because it's the asarone that makes it what it is. Anyway, that is just a warning to you to make sure your calamus comes from India of which there are still plenty of suppliers. In Table X is the component breakdown of a typical calamus oil sample [2, vol. III, p. 183].

# TABLE X. Comparative Chemical Composition of Indian Calamus Root Oil

| 2-furfural 1.02 furylmethyl ketone + camphor 0.06 linalool 0.1 5-methyl-2-furfural 0.15 beta-gurjunene 0.17 caryophyllene 0.01 gamma-elemene + allo-aromadendrene 0.03 alpha-humulene 0.04 germacrene 0.07 beta-curcumene 0.07 beta-curcumene 0.14 beta-bisabolene 0.14 alpha-bisabolene 0.07 delta-cadinene 0.21 beta-sesquiphellandrene 0.13 ar. curcumene 0.12 6-epishybunone 0.11 2,6-diepishybunone 0.12 6-epishybunone 0.12 6-epishybunone 0.12 cisoshybunone 0.38 alpha-calacorene 0.38 alpha-calacorene 0.99 a calacorene 0.09 re-isocalamendiol 0.91 wiridiflorol 0.01 methyl eugenol 0.02 elemol 0.004 linalool 0.05 elemol 0.005 elemol 0. | Compound                      | %    |
|--|-------------------------------|------|
| furyImethyl ketone + camphor    Inalool  | cis-ocimene                   | 0.05 |
| Inialoo  | 2-furfural                    | 1.02 |
| Inialoo  | furylmethyl ketone + camphor  | 0.06 |
| 5-methyl-2-furfural         0.15           beta-gurjunene         0.17           caryophyllene         0.01           gamma-elemene + allo-aromadendrene         0.03           alpha-humulene         0.04           viridiflorene         0.04           germacrene D         0.07           beta-curcumene         0.14           beta-bisabolene         0.14           alpha-bisabolene         0.07           delta-cadinene         0.21           beta-sesquiphellandrene         0.13           ar. curcumene         0.42           a shyobunone epimer         0.12           6-epishybunone         0.11           2,6-diepishybunone         0.12           soshybunone         0.12           sioshybunone         0.38           alpha-calacorene         0.03           acalacorene         0.03           caryophyllene oxide         0.02           ore-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.04           cis-methyl isoeugenol         0.05           elemicin         0.58           trans-methyl isoe   | linalool                      |      |
| Deta-gurjunene   | 5-methyl-2-furfural           |      |
| caryophyllene         0.01           gamma-elemene + allo-aromadendrene         0.03           alpha-humulene         0.04           viridiflorene         0.04           germacrene D         0.07           beta-curcumene         0.14           beta-bisabolene         0.07           delta-bisabolene         0.07           delta-cadinene         0.21           beta-sesquiphellandrene         0.13           ar. curcumene         0.42           a shyobunone epimer         0.12           6-epishybunone         0.11           2,6-diepishybunone         0.12           soshybunone         0.46           an isoshybunone epimer         0.2           shybunone         0.38           alpha-calacorene         0.89           a calacorene         0.03           caryophyllene oxide         0.02           ore-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.16           10-alpha-   |                               |      |
| gamma-elemene + allo-aromadendrene         0.03           alpha-humulene         0.04           viridiflorene         0.04           germacrene D         0.07           beta-curcumene         0.14           beta-bisabolene         0.07           delta-bisabolene         0.07           delta-cadinene         0.21           beta-sesquiphellandrene         0.13           ar. curcumene         0.42           a shyobunone epimer         0.12           6-epishybunone         0.11           2,6-diepishybunone         0.12           isoshybunone         0.38           alpha-calacorene         0.38           alpha-calacorene         0.03           acalacorene         0.03           caryophyllene oxide         0.02           ore-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.16           tans-methyl isoeugenol         0.16           tans-met   |                               |      |
| alpha-humulene         0.04           viridiflorene         0.04           germacrene D         0.07           beta-curcumene         0.14           beta-bisabolene         0.07           delta-bisabolene         0.07           delta-cadinene         0.21           beta-sesquiphellandrene         0.13           ar. curcumene         0.42           a shyobunone epimer         0.12           6-epishybunone         0.11           2,6-diepishybunone         0.12           soshybunone         0.46           an isoshybunone epimer         0.2           shybunone         0.38           alpha-calacorene         0.89           a calacorene         0.03           caryophyllene oxide         0.02           pre-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.16           drans-methyl isoeugenol         0.16           dro-alpha-cadinol   |                               |      |
| viridiflorene         0.04           germacrene D         0.07           beta-curcumene         0.14           beta-bisabolene         0.07           delta-cadinene         0.21           beta-sesquiphellandrene         0.13           ar. curcumene         0.42           a shyobunone epimer         0.12           6-epishybunone         0.11           2,6-diepishybunone         0.12           soshybunone         0.46           an isoshybunone epimer         0.2           shybunone         0.38           alpha-calacorene         0.03           caryophyllene oxide         0.02           ore-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.16           trans-methyl isoeugenol         0.16           to-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone   |                               |      |
| germacrene D         0.07           beta-curcumene         0.14           beta-bisabolene         0.14           alpha-bisabolene         0.07           delta-cadinene         0.21           beta-sesquiphellandrene         0.13           ar. curcumene         0.42           a shyobunone epimer         0.12           6-epishybunone         0.11           2,6-diepishybunone         0.12           soshybunone         0.46           an isoshybunone epimer         0.2           shybunone         0.38           alpha-calacorene         0.03           caryophyllene oxide         0.02           pre-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.16           trans-methyl isoeugenol         0.16           trans-methyl isoeugenol         0.16           to-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-iso   |                               |      |
| Deta-curcumene   Deta-curcumene   Deta-bisabolene   Deta-bisabolene   Deta-bisabolene   Deta-bisabolene   Deta-cadinene   Deta-sesquiphellandrene   Deta-sesquiphellandrene   Deta-sesquiphellandrene   Deta-sesquiphellandrene   Deta-sesquiphellandrene   Deta-sesquiphellandrene   Deta-sesquiphellandrene   Deta-sesphybunone   Deta-cadinol   Deta-sesphybunone   Deta-cadinol   Deta-   |                               |      |
| beta-bisabolene         0.14           alpha-bisabolene         0.07           delta-cadinene         0.21           beta-sesquiphellandrene         0.13           ar. curcumene         0.42           a shyobunone epimer         0.12           6-epishybunone         0.11           2,6-diepishybunone         0.12           soshybunone         0.46           an isoshybunone epimer         0.2           shybunone         0.38           alpha-calacorene         0.03           caryophyllene oxide         0.02           pre-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.16           trans-methyl isoeugenol         0.16           trans-methyl isoeugenol         0.16           trans-methyl isoeugenol         0.17           tas-isoelemicin         0.29           trans-beta-asarone         77.68           socalamendiol         0.45 <td< td=""><td>-</td><td></td></td<>  | -                             |      |
| alpha-bisabolene         0.07           delta-cadinene         0.21           beta-sesquiphellandrene         0.13           ar. curcumene         0.42           a shyobunone epimer         0.12           6-epishybunone         0.11           2,6-diepishybunone         0.12           isoshybunone         0.46           an isoshybunone epimer         0.2           shybunone         0.38           alpha-calacorene         0.03           acaryophyllene oxide         0.02           ore-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.05           elemicin         0.58           trans-methyl isoeugenol         0.16           10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           isocalamendiol         0.45           alpha-asarone   |                               |      |
| delta-cadinene         0.21           beta-sesquiphellandrene         0.13           ar. curcumene         0.42           a shyobunone epimer         0.12           6-epishybunone         0.11           2,6-diepishybunone         0.46           an isoshybunone epimer         0.2           shybunone         0.38           alpha-calacorene         0.89           a calacorene         0.03           caryophyllene oxide         0.02           pre-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.05           elemicin         0.58           trans-methyl isoeugenol         0.16           10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           isocalamendiol         0.45           alpha-asarone         6.8           calamendiol  |                               |      |
| beta-sesquiphellandrene         0.13           ar. curcumene         0.42           a shyobunone epimer         0.12           6-epishybunone         0.11           2,6-diepishybunone         0.12           isoshybunone         0.46           an isoshybunone epimer         0.2           shybunone         0.38           alpha-calacorene         0.89           a calacorene         0.03           caryophyllene oxide         0.02           pre-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.05           elemicin         0.58           trans-methyl isoeugenol         0.16           10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           isocalamendiol         0.45           alpha-asarone         6.8           calamendiol         <  |                               |      |
| ar. curcumene  |                               |      |
| a shyobunone epimer 0.12 6-epishybunone 0.11 2,6-diepishybunone 0.12 soshybunone 0.46 an isoshybunone 0.38 alpha-calacorene 0.89 a calacorene 0.03 caryophyllene oxide 0.91 viridiflorol 0.91 viridiflorol 0.02 elemol 0.06 cis-methyl eugenol 0.09 T-cadinol 0.09 T-cadinol 0.09 T-cadinol 0.05 elemicin 0.58 trans-methyl isoeugenol 0.16 a guaiazulene isomer 0.17 cis-isoelemicin 0.91 trans-beta-sesquiphellandrol 0.09 trans-beta-sesquiphellandrol 0.45 alpha-asarone 6.8 calamendiol 0.42 asaronaldehyde 0.37  |                               |      |
| 6-epishybunone         0.11           2,6-diepishybunone         0.12           soshybunone         0.46           an isoshybunone epimer         0.2           shybunone         0.38           alpha-calacorene         0.89           a calacorene         0.03           caryophyllene oxide         0.02           pre-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.05           elemicin         0.58           trans-methyl isoeugenol         0.16           10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           socalamendiol         0.45           alpha-asarone         6.8           calamendiol         0.42           2,4,5-trimethoxypenylacetone         0.33           asaronaldehyde         0.37  |                               |      |
| 2,6-diepishybunone         0.12           isoshybunone         0.46           an isoshybunone         0.2           shybunone         0.38           alpha-calacorene         0.89           a calacorene         0.03           caryophyllene oxide         0.02           pre-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.05           elemicin         0.58           trans-methyl isoeugenol         0.16           10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           isocalamendiol         0.09           trans-beta-sesquiphellandrol         0.45           alpha-asarone         6.8           calamendiol         0.42           2,4,5-trimethoxypenylacetone         0.33           asaronaldehyde         0.37   |                               |      |
| Soshybunone   0.46   |                               |      |
| an isoshybunone epimer 0.2 shybunone 0.38 alpha-calacorene 0.89 a calacorene 0.003 caryophyllene oxide 0.02 pre-isocalamendiol 0.91 wiridiflorol 0.01 methyl eugenol 0.02 elemol 0.06 cis-methyl isoeugenol 1.33 eugenol 0.09 T-cadinol 0.04 10-epi-alpha-cadinol 0.05 elemicin 0.58 trans-methyl isoeugenol 0.16 10-alpha-cadinol 0.11 a guaiazulene isomer 0.17 cis-isoelemicin 1.29 beta-asarone 77.68 isocalamendiol 0.09 trans-beta-sesquiphellandrol 0.45 alpha-asarone 6.8 calamendiol 0.42 2,4,5-trimethoxypenylacetone 0.33 asaronaldehyde 0.37   |                               |      |
| shybunone         0.38           alpha-calacorene         0.89           a calacorene         0.03           caryophyllene oxide         0.02           pre-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.05           elemicin         0.58           trans-methyl isoeugenol         0.16           10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           isocalamendiol         0.09           trans-beta-sesquiphellandrol         0.45           alpha-asarone         6.8           calamendiol         0.42           2,4,5-trimethoxypenylacetone         0.33           asaronaldehyde         0.37   |                               |      |
| alpha-calacorene         0.89           a calacorene         0.03           caryophyllene oxide         0.02           pre-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.05           elemicin         0.58           trans-methyl isoeugenol         0.16           10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           isocalamendiol         0.09           trans-beta-sesquiphellandrol         0.45           alpha-asarone         6.8           calamendiol         0.42           2,4,5-trimethoxypenylacetone         0.33           asaronaldehyde         0.37  |                               |      |
| a calacorene 0.03 caryophyllene oxide 0.02 pre-isocalamendiol 0.91 wiridiflorol 0.01 methyl eugenol 0.02 elemol 0.06 cis-methyl isoeugenol 1.33 eugenol 0.09 T-cadinol 0.04 10-epi-alpha-cadinol 0.05 elemicin 0.58 trans-methyl isoeugenol 0.16 10-alpha-cadinol 0.11 a quaiazulene isomer 0.17 cis-isoelemicin 1.29 beta-asarone 77.68 isocalamendiol 0.09 trans-beta-sesquiphellandrol 0.45 alpha-asarone 6.8 calamendiol 0.42 2,4,5-trimethoxypenylacetone 0.33 asaronaldehyde 0.37  |                               |      |
| caryophyllene oxide         0.02           pre-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.05           elemicin         0.58           trans-methyl isoeugenol         0.16           10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           isocalamendiol         0.09           trans-beta-sesquiphellandrol         0.45           alpha-asarone         6.8           calamendiol         0.42           2,4,5-trimethoxypenylacetone         0.33           asaronaldehyde         0.37  |                               |      |
| pre-isocalamendiol         0.91           viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.05           elemicin         0.58           trans-methyl isoeugenol         0.16           10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           isocalamendiol         0.09           trans-beta-sesquiphellandrol         0.45           alpha-asarone         6.8           calamendiol         0.42           2,4,5-trimethoxypenylacetone         0.33           asaronaldehyde         0.37   |                               |      |
| viridiflorol         0.01           methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.05           elemicin         0.58           trans-methyl isoeugenol         0.16           10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           isocalamendiol         0.09           trans-beta-sesquiphellandrol         0.45           alpha-asarone         6.8           calamendiol         0.42           2,4,5-trimethoxypenylacetone         0.33           asaronaldehyde         0.37   |                               |      |
| methyl eugenol         0.02           elemol         0.06           cis-methyl isoeugenol         1.33           eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.05           elemicin         0.58           trans-methyl isoeugenol         0.16           10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           isocalamendiol         0.09           trans-beta-sesquiphellandrol         0.45           alpha-asarone         6.8           calamendiol         0.42           2,4,5-trimethoxypenylacetone         0.33           asaronaldehyde         0.37   |                               |      |
| Selemol   0.06   |                               |      |
| cis-methyl isoeugenol       1.33         eugenol       0.09         T-cadinol       0.04         10-epi-alpha-cadinol       0.05         elemicin       0.58         trans-methyl isoeugenol       0.16         10-alpha-cadinol       0.11         a guaiazulene isomer       0.17         cis-isoelemicin       1.29         beta-asarone       77.68         isocalamendiol       0.09         trans-beta-sesquiphellandrol       0.45         alpha-asarone       6.8         calamendiol       0.42         2,4,5-trimethoxypenylacetone       0.33         asaronaldehyde       0.37   |                               |      |
| eugenol         0.09           T-cadinol         0.04           10-epi-alpha-cadinol         0.05           elemicin         0.58           trans-methyl isoeugenol         0.16           10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           isocalamendiol         0.09           trans-beta-sesquiphellandrol         0.45           alpha-asarone         6.8           calamendiol         0.42           2,4,5-trimethoxypenylacetone         0.33           asaronaldehyde         0.37  |                               |      |
| T-cadinol         0.04           10-epi-alpha-cadinol         0.05           elemicin         0.58           trans-methyl isoeugenol         0.16           10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           isocalamendiol         0.09           trans-beta-sesquiphellandrol         0.45           alpha-asarone         6.8           calamendiol         0.42           2,4,5-trimethoxypenylacetone         0.33           asaronaldehyde         0.37   |                               |      |
| 10-epi-alpha-cadinol   0.05     10-epi-alpha-cadinol   0.58     10-alpha-cadinol   0.16     10-alpha-cadinol   0.11     10-alpha-cadinol   0.17     10-alpha-cadinol   0.17     10-alpha-cadinol   0.17     10-alpha-cadinol   1.29     10-alpha-cadinol   1   |                               |      |
| Selemicin   0.58     Strans-methyl isoeugenol   0.16     10-alpha-cadinol   0.11     a quaiazulene isomer   0.17     cis-isoelemicin   1.29     beta-asarone   77.68     isocalamendiol   0.09     strans-beta-sesquiphellandrol   0.45     alpha-asarone   6.8     calamendiol   0.42     2,4,5-trimethoxypenylacetone   0.33     asaronaldehyde   0.37   |                               |      |
| trans-methyl isoeugenol         0.16           10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           isocalamendiol         0.09           trans-beta-sesquiphellandrol         0.45           alpha-asarone         6.8           calamendiol         0.42           2,4,5-trimethoxypenylacetone         0.33           asaronaldehyde         0.37  |                               |      |
| 10-alpha-cadinol         0.11           a guaiazulene isomer         0.17           cis-isoelemicin         1.29           beta-asarone         77.68           isocalamendiol         0.09           trans-beta-sesquiphellandrol         0.45           alpha-asarone         6.8           calamendiol         0.42           2,4,5-trimethoxypenylacetone         0.33           asaronaldehyde         0.37   |                               |      |
| a quaiazulene isomer       0.17         cis-isoelemicin       1.29         beta-asarone       77.68         isocalamendiol       0.09         trans-beta-sesquiphellandrol       0.45         alpha-asarone       6.8         calamendiol       0.42         2,4,5-trimethoxypenylacetone       0.33         asaronaldehyde       0.37   |                               | 0.10 |
| cis-isoelemicin       1.29         beta-asarone       77.68         isocalamendiol       0.09         trans-beta-sesquiphellandrol       0.45         alpha-asarone       6.8         calamendiol       0.42         2,4,5-trimethoxypenylacetone       0.33         asaronaldehyde       0.37   |                               |      |
| beta-asarone         77.68           isocalamendiol         0.09           trans-beta-sesquiphellandrol         0.45           alpha-asarone         6.8           calamendiol         0.42           2,4,5-trimethoxypenylacetone         0.33           asaronaldehyde         0.37  | ois-is-palamicin              |      |
| Socalamendiol   0.09   |                               |      |
| trans-beta-sesquiphellandrol         0.45           alpha-asarone         6.8           calamendiol         0.42           2,4,5-trimethoxypenylacetone         0.33           asaronaldehyde         0.37   |                               |      |
| alpha-asarone       6.8         calamendiol       0.42         2,4,5-trimethoxypenylacetone       0.33         asaronaldehyde       0.37   | trans-beta-sesquiphellandrol  |      |
| calamendiol 0.42<br>2,4,5-trimethoxypenylacetone 0.33<br>asaronaldehyde 0.37   |                               |      |
| 2,4,5-trimethoxypenylacetone 0.33<br>asaronaldehyde 0.37   |                               |      |
| asaronaldehyde 0.37  |                               |      |
|  |                               |      |
|  | 2,4,5-trimethoxypropiophenone | 0.03 |

There are other geographical sources of asarone-containing calamus oil to be sure. The aforementioned European calamus can have anywhere from 0.2 - 10% asarone [22], and various sources from around Japan have reported 20-90% asarone content [23].

Carrot Seed Oil: (*Dracunculus carota*) Unlike most carrot seed oils, apparently the Japanese climate agrees with the plant, causing it to have a massive 40.32% asarone content [24]. The Chinese oil has 2.32% asarone [25].

Clove Bud Oil: Just the bud. And only from one species as described in reference 21 (see Benzyl alcohol). The asarone content is about 1.5%.

Orthondon asaroniferum Fujita Oil: A member of the Labiatae family. Don't ask 'cause I don't know. I just know that whatever this plant is, and wherever it grows, it has an asarone content of 25-35% [2, vol. IV, p. 204]

## BENZALDEHYDE

**Bitter Almond Oil:** There's no need to beat around the bush here, folks. This is the best and most concentrated source on the planet. At 98% conc., Bitter Almond Oil is almost pure benzaldehyde. The oil is plentiful and cheap because benzaldehyde is a major flavoring and fragrance chemical used in many products. Benzaldehyde can also be found in peach and apricot kernel oils.

Cassia Oil: (*Cinnamomum cassia*) It has been previously described that oils from various parts of the cassia tree have the following benzaldehyde contents: leaf = 2.68%, bark = 4.73% [19].

#### BENZYLALCOHOL

**Hyacinth Absolute:** (*Hyacinthus orientalis* L.) The "Absolute" is the extract from the flowers of this plant and contains 40% benzyl alcohol [20]

**Jasmin Oil:** Egyptian oil has 4.68%. French oil has 11.0%. Italian oil has 7.0% and Algerian oil has 2.0%.

**Narcissus Oil:** The extract from the flower. Very fucking expensive. Why bother? The average benzyl alcohol content of the oil is 13%.

**Clove Oil:** I could only find one reference indicating that the leaf oil from a particular species (*Syzygium aromaticum*) of clove found in India has a 1.39% benzyl alcohol content [21]

#### CHAVICOL

No, this not anethole! It is the allylbenzene isomer whereas anethole is a propenylbenzene. There are not as many sources for this compound as I had first surmised. But what the hell?! I'll take what I can get. From what I have gleaned from the literature so far, chavicol likes to come from the Caribbean.

**Bay Oil:** There are three major types of bay oil in the world: (1) California Bay (*Umbelluria californica*) which grows in California and Oregon, (2) West Indian Bay (*Pimenta racemosa*) from the (where else) West Indies of the Caribbean (mainly the Dominican Republic) and

(3) Sweet Bay (*Laurus nobilis*) which comes from the Mediterranean but grows all over the world. Sweet Bay is the source of the bay leaves that you and I see on the spice shelves of the grocery store (sometimes called "Bay Laurel").

But only one of the three bay types has chavicol. And that one is the West Indian Bay with about 21% chavicol content. So ask for it by name! All three oil types are very common and easy to obtain.

Pimento Berry Oil: No, not the little red thing in the middle of an olive. That is just a piece of roasted red bell pepper. What I'm talking about is something called a pimento berry (which is also commonly known as Allspice). Jamaica is where most of them come from but, alas, Jamaican pimento berries don't have chavicol. But Guatemalan and Mexican berry oils have about 1.2% chavicol [26]. Big whoop!

#### DILLAPIOLE

**Dill Oil:** What else?! What else, indeed! There are some very important distinctions about dill oil that you need to know in order to save yourself a lot of grief. On the planet called earth are two varieties of dill: *Anethum graveolens* and *Anethum sowa*. *A. graveolens* is the dill that grows in Europe, North America or wherever. *A. sowa* is the dill that grows in India and surrounding countries.

A. graveolens, with some exceptions, has no goodies in the two parts of the plant (seed/fruit and herb) that are used to make dill essential oils. In Table XI is a comparative composition of various parts of the plant [2, vol. III, p.165]. Sob! Look at the roots, folks!

TABLE XI. Comparative Chemical Composition of the Oils Obtained From Different Parts of the Dill Plant

| Compound           | Fruit     | Plant | Roots |
|--------------------|-----------|-------|-------|
| alpha-pinene       | trace     | 2.5   | 0.3   |
| camphene           | trace     | trace | 0.1   |
| beta-pinene        | trace     | 0.2   | 1.6   |
| sabinene           | _         | trace | 1.3   |
| myrcene            | 0.3       | 0.4   | 0.3   |
| alpha-phellandrene | 0.4-1.1   | 49    | 2.5   |
| limonene           | 39.5-39.6 | 3.7   | 2.4   |
| beta-phellandrene  | 1.2-1.3   | 9     | 0.3   |
| cis-ocimene        | trace-0.1 | 0.2   | 0.1   |
| p-cymene           | trace-0.1 | 4.4   | 0.2   |
| terpinolene        | trace     | 0.3   | 13.3  |
| unknown            | trace-0.4 | 23.7  | 0.4   |
| carvone            | 54.6-54.8 | 0.2   | 0.1   |
| myristicin         | trace-0.4 | 0.1   | 17.9  |
| dill apiole        |           |       | 11.4  |
| parsley apiole     |           | _     | 19.9  |

Now then, *A. sowa* is another story. Various reports show little to none dillapiole in the herb oil, but Baslas reports that one Indian herb oil contained 8.6% [27]. Dill seed oil is the bomb, though. It consistently displays dill apiole content from 20.7 - 66.8% [28,29]. Lucky you, because the seed oil is the most common.

Carrot Seed Oil: Although the standard way of extracting the essential oil is to use steam distillation, Cu et al used the solvent DCM and got 36% dillapiole whereas there was only trace amounts using steam. [20]. It shows that the stuff is there; and it is just a matter of getting to it. As it so happens, DCM is a very common solvent/extraction system in the essential oil industry. Most suppliers are very open as to what their oils are extracted with.

**Fennel Root Oil:** Table IX from the Apiole section shows ya that fennel roots have 5.3% dillapiole. Just to drive the point home, it was shown that the same species grown in Japan had root oil content of 87.3% dillapiole [30, vol. III, p. 98]! I dunno, folks. There's something about Asian soil that drives these mild-mannered essential oil-bearing plants nuts!

#### ELEMICIN

**Citronella Oil:** (*Cymbopogon winterianus*) Citronella comes from all over the world and I had found no study that showed it to contain anything of note. But, in 1992, one study showed that the oil produced only in Brazil contains 7.3% elemicin. [3].

*Collinsonia candemnsis* L. Oil: This plant is a North American species and has is also known as stone root, horsebalm, horseweed, and knob root. It can grow in the eastern US and up into Ontario, Canada. Its oil has 3.6% elemicin [80].

**Elemi Oil:** From the elemi tree of the Philippines and nowhere else. The true oil comes from scraping the bark and is so thick that it is often termed as resinous. The elemicin content ranges from 3.4 - 10.6%.

**Nutmeg Oil:** Oh the fun things nutmeg holds. Elemicin happens to be one of them. As it so happens, the nutmeg plant grows mainly in two places: the West Indies of the Carribean (esp. Grenada) and Indonesia. In Table XII by Lawrence you can see a mammoth component comparison of various global nutmeg sources [2, vol. I, p. 82].

# TABLE XII. Comparative Chemical Composition of Nutmeg Oils of Various Origins

|                        | W    | est Indi | an   |      |      | East | Indian |      |      |
|------------------------|------|----------|------|------|------|------|--------|------|------|
| Compound               | 1    | 2        | 3    | 4    | 5    | 6    | 7      | 8    | 9    |
| alpha-pinene           | 13.2 | 10.6     | 12.6 | 21.3 | 18   | 19.9 | 21.2   | 19.2 | 26.5 |
| camphene               | 0.2  | 0.2      | 0.2  | 0.3  | 0.3  | 0.3  | 0.3    | 0.4  | 0.4  |
| beta-pinene            | 8    | 7.8      | 12.1 | 14.3 | 9.7  | 17.7 | 12.7   | 11   | 15   |
| sabinene               | 42   | 50.7     | 49.6 | 30   | 27   | 36.3 | 17.8   | 15.4 | 27.1 |
| myrcene                | 3.4  | 2.5      | 2.8  | 2.4  | 2.2  | 2.5  | 2.6    | 2.3  | 3.7  |
| alpha-phellandrene     | 0.7  | 0.4      | 0.6  | 0.5  | 0.5  | 0.4  | 1      | 0.7  | 0.9  |
| alpha-terpinene        | 4.2  | 0.8      | 1.9  | 1.1  | 2    | 0.8  | 4      | 2.5  | 2    |
| limonene               | 4.4  | 3.1      | 3.3  | 2.7  | 2.7  | 2.8  | 3.6    | 3.4  | 3.6  |
| 1,8-cineole            | 4.2  | 2.5      | 2.3  | 1.9  | 1.8  | 1.5  | 3.2    | 2.7  | 2.2  |
| gamma-terpinene        | 4.7  | 1.9      | 3.1  | 1.9  | 3.3  | 1.3  | 6.8    | 4.1  | 2.9  |
| p-cymene               | 0.8  | 3.2      | 0.7  | 0.5  | 0.7  | 0.3  | 1.8    | 2.7  | 0.6  |
| terpinolene            | 1.7  | 1.7      | 1.2  | 1.1  | 1.1  | 0.6  | 2.1    | 2.6  | 1.7  |
| trans-sabinene hydrate | 0.9  | 0.8      | 0.3  | 0.1  | 0.6  | 0.6  | 0.3    | 0.5  | 0.3  |
| copaene                | 0.8  | 0.3      | t.   | 0.2  | 0.3  | t.   | 0.2    | 0.2  | 0.2  |
| linalool               | 0.3  | 0.9      | 0.4  | 1    | 0.3  | 0.2  | 0.8    | 0.9  | 0.2  |
| cis-sabinene hydrate   | 0.5  | 0.7      | 0.2  | 0.2  | 0.6  | 0.2  | 0.2    | 0.4  | 0.2  |
| cis-p-menth-2-en-1-ol  | 0.3  | 0.4      | 0.1  | 0.3  | 0.5  | 0.1  | 0.3    | 0.3  | 0.1  |
| terpinen-4-ol          | 4.7  | 6.1      | 3.5  | 3.9  | 7.3  | 2    | 9.3    | 10.9 | 3    |
| cis-piperitol          | 1.2  | 0.5      | 0.4  | 0.6  | 0.4  | 0.3  | 0.5    | 0.3  | 0.1  |
| safrole                | 0.1  | 0.2      | 0.1  | 1.5  | 2.1  | 0.6  | 1.9    | 3.2  | 1.7  |
| methyl eugenol         | 0.1  | 0.2      | 0.1  | 0.2  | 1.2  | 0.6  | 0.6    | t.   | 0.1  |
| eugenol                | t.   | 0.2      | t.   | 0.1  | 0.7  | 0.3  | t.     | t.   | 0.2  |
| elemicin               | 1.2  | 1.4      | 1.3  | 0.4  | 0.5  | 4.6  | 0.3    | 0.3  | 0.1  |
| myrsticin              | 0.9  | 0.5      | 0.8  | 10.4 | 13.5 | 3.3  | 6.3    | 12.4 | 5.9  |

[Note: 1,3=Grenada, 2=St. Vincent, 4=Papau, 5=Penang, 6,9=Indonesia, 7,8=Singapore]

There are various reports hyping elemicin content as being up to 5-6% in nutmeg, but Table XII's numbers are fairly representative of most of what I've seen in the literature.

**Mace Oil:** Mace is a spice similar in nature to nutmeg and, like nutmeg, it has elemicin. Approximately 2% to be exact.

*Orthondon elemiciniferum* Fajita Oil: Another one of those crazy Labiatae species that I have no idea where to look for. It just says here that its elemicin content is between 10-40% [2, vol. IV, p. 204].

**Parsley Seed Oil:** Only in the seed oil. It seems that any parsley seed source has around 4-7% elemicin in it [32].

**Snakeroot Oil:** (*Asarum canadense*) A North American species that has a lot of anecdotal medicinal use. It seems that Canadian snakeroot oil has 1.76% elemicin [34].

**Tarragon Oil:** (*Artemisia dracunculus*) A strongly aromatic, licorice-flavored spice. Mmmm! Mmmm! Love it in a nice Bearnaise sauce. Lawrence explains a little more about it [2, vol. IV, p. 5].

"Throughout the horticulture trade it has been known for a long time that there were two forms of tarragon: a fine aromatic sterile plant often referred to as French tarragon, and a scrubbier, weakly aromatic seed-producing perennial known as Russian tarragon. . . numerous names have been used for the Russian tarragon (var. *Indora*, var. *Sative*, var. *Redovskyi* Ldb. Ssp. *Turkestanica*, etc."

It was further noted that the French variety was the preferred one of commerce but that "Russian" oil was often a substitute. So what the hell does this have to do with anything? Well, look at Table XIII and see for yourself [2, vol. IV, p. 6].

## TABLE XIII. Comparative Chemical Composition of 'Three' Different Forms of Tarragon

| Compound               | French      | German      | Russian     |
|------------------------|-------------|-------------|-------------|
| alpha-pinene           | 0.55-1.99   | 0.23-1.29   | 0.40-0.60   |
| camphene               | 0.04-0.22   | 0.01-0.35   | 0.23-0.35   |
| beta-pinene + sabinene | 0.12-0.42   | 24.16-46.78 | 31.80-43.70 |
| myrcene                | 0.10-0.19   | 0.65-1.70   | 1.33-1.65   |
| cis-ocimene            | 5.03-9.49   | 0.48-4.22   | 3.47-4.22   |
| trans-ocimene          | 4.68-9.10   | 0.35-6.59   | 4.60-6.59   |
| terpinen-4-ol          | 0.08-0.47   | 2.12-6.46   | 2.85-3.20   |
| methyl chavicol        | 73.34-81.90 | nd          | nd          |
| methyl eugenol         | 0.35-1.52   | 5.86-35.59  | 5.92-9.19   |
| eugenol                | 0.05-0.36   | nd          | nd          |
| methyl isoeugenol      | nd          | 0.10-1.89   | 0.05-0.35   |
| elemicin               | nd          | 3.40-18.37  | 23.43-33.45 |
| trans-isoelemicin      | nd          | 0.31-10.12  | 0.26-0.31   |
|                        |             |             |             |
| Oil content            | 0.18-0.49   | 0.13-0.36   | 0.18-0.41   |

I don't see how any of these varieties could be mistaken for the other. Their major aromatic components are totally different. Finally, it is worth noting that the oil from the fresh leaves of Russian tarragon (as opposed to the more common practice of taking oil from the dried leaves) gave an elemicin content of 60% [35]! You can see the component breakdown from this study in Table XXI from the Methylisoeugenol section.

#### EUGENOL

Lord, how I've dreaded having to write this section on eugenol. There were so many sources and multiple reports on the sources that coordinating it all into a concise, informative piece was gonna make me insane. And yes, Lam now insane.

**Basil Oil:** There are two main varieties of basil: *Ocimum basilicum* which is known as sweet basil and is the most common, and *Ocimum gratissimum* which is considered to represent the eugenol-rich oils. There seems to be a lot of confusion in the literature whether any particular commercial oil is from one plant type or the other. It is, however, generally agreed that the basil oils from Russia, Egypt, Morocco and other North African countries are the highest in eugenol content. Hell, I don't know. It seems like most every sample in Table XIV is full of it [combo from 2, vol. I (1978), p. 19, 2 vol. II, p. 20, & 2 vol. III, p. 232].

TABLE XIV. Comparative Chemical Composition of Basil Oils From Various Origins

|                  |       |       | Origin |       |       |       |       |           |
|------------------|-------|-------|--------|-------|-------|-------|-------|-----------|
| Compound         | 1     | 2     | 3      | 4     | 5     | 6     | 7     | 8         |
| alpha-pinene     | 0.3   | 0.18  | 0.11   | 0.25  | 0.47  | 0.17  | 0.35  | 0-0.4     |
| camphene         | 0.07  | 0.06  | 0.02   | 0.07  | 0.1   | 0.02  | 0.09  | 0-0.3     |
| beta-pinene      | 0.38  | 0.25  | 0.07   | 0.43  | 0.83  | 0.26  | 0.67  | 0-0.4     |
| myrcene          | 0.32  | 0.12  | 0.13   | 0.35  | 0.8   | 0.18  | 0.68  | 0-0.3     |
| limonene         | 4.94  | 2.64  | 2.04   | 4.73  | 9.34  | 0.2   | 0.26  | 0-0.4     |
| cis-ocimene      | 0.11  | 2.52  | 0.03   | 0.63  | 1.19  | trace | trace | 0.3-14.5  |
| p-cymene         | _     | 0.06  | 0.05   | 0.1   | 0.16  | 0.15  | trace | 0-0.6     |
| cis-3-hexanol    | _     | 0.02  | 0.06   | 0.08  | 0.07  | 0.05  | 0.4   | _         |
| fenchyl acetate  | 0.11  | 0.2   | 0.55   | 0.09  | 0.14  | 0.24  | 0.41  | -         |
| camphor          | 0.75  | 0.37  | 1.43   | 0.57  | 1.17  | -     | _     | 0-6.7     |
| linalool         | 54.37 | 1.16  | 40.72  | 45.55 | 48.09 | 43.8  | 41.9  | 0.1-0.7   |
| fenchyl alcohol  | 6.29  | 1.2   | 6.7    | 5.52  | 9.51  | 5.2   | 8.4   | -         |
| methyl chavicol  | 2.38  | 85.76 | 23.79  | 26.56 | 3.04  | 31.8  | 2.6   | _         |
| alpha-terpineol  | 0.83  | 0.84  | 1.9    | 1.09  | 1.34  | 1.19  | 2.5   | _         |
| citronellol      | 2.77  | 0.65  | 3.57   | 1.76  | 3.69  | 1.63  | 1.9   | -         |
| geraniol         | 0.19  | 0.03  | 0.38   | 0.2   | 0.18  | 0.39  | 0.28  | -         |
| methyl cinnamate | 0.34  | 0.05  | 0.34   | 0.25  | -     | 0.16  | trace | _         |
| eugenol          | 12.19 | 0.74  | 5.9    | 5.9   | 9.45  | 3.4   | 19.2  | 31.5-90.5 |

[Note: 1=S. Africa, 2=Comoro Islands, 3=France, 4=Egypt(Delta Region), 5=Egypt(Fayoum Region), 6=Italy, 7=Morocco, 8=Russia]

Bay Oil: As was described in the Chavicol Section, there are three main types of bay trees: (1) California Bay (*Umbelluria californica*), (2) West Indian Bay (*Pimenta racemosa*) and (3) Sweet Bay or Bay Laurel (*Laurus nobilis*). A lot of people refer to Bay Laurel simply as Laurel, and the oil from it as laurel leaf oil. Bay Laurel is chiefly grown in the countries of the Mediterranean.

The California Bay oil has only trace amounts of eugenol. The laurel oil has about an average of 5% eugenol from any given country except for Japan which reports a content of 20% [36] and Pakistan which has a content of 15-16% [37].

The mother lode of eugenol is going to be found in the West Indian bay oil of the Dominican Republic and surrounding nations. Eugenol content ranges from 38.6 - 75% [38].

**Betel Leaf Oil:** Grown in India and Bangladesh as an ingredient for a popular spice package known as "pan." See Table III in the Anethole section for a sampling of India's betel oil eugenol content.

Carnation Oil: (*Dianthus caryophyllus*) Man this shit is expensive! But the Egyptian oil has a eugenol content of 13-20%. France, Kenya and most Mediterranean countries give an oil that is about 3-5%.

**Carrot Seed Oil:** Only in the particular variety of carrot grown in Japan which I referenced in the Asarone section [24]. Japanese carrot seed was about 1.72% eugenol.

Cinnamon Oil: (Cinnamonum zeylanicum) There are two major oils of commerce that come from the cinnamon tree: leaf oil and bark oil. That reddish-brown stuff on your spice shelf is ground-up bark. It has only a small amount of eugenol when compared to the leaf oil. You can see what I mean when you look at Table XV. The table shows you a

breakdown of the chemical components of cinnamon oils and gives the range of each that was found in a global sampling of commercial oil sources as of 1993 [39].

TABLE XV. Components of the Essential Oils of Cinnamon Leaf and Bark

| Compound                      | leaf oil  | bark oil  |
|-------------------------------|-----------|-----------|
| 1,8-cineole/beta-phellandrene | 0.2-0.6   | 1.0-2.0   |
| alpha-copaene                 | T-0.7     | 0.5       |
| camphor                       | T-0.3     | T-1.4     |
| benzaldehyde                  | T-0.2     | T-2.2     |
| linalool                      | 2.0-5.0   | 0.2-3.1   |
| salicylaldehyde               | ×—        | 100-10    |
| phenylpropanol                | Т         | 0.6-1.0   |
| terpinen-4-ol                 | _         | 0.6-1.1   |
| beta-caryophyllene            | 1.9-3.7   | 1.3-3.3   |
| alpha-terpineol               | 0.2-0.4   | 0.4-1.4   |
| (E)-cinnamaldehyde            | 0.6-1.13  | 65.4-75.0 |
| (E)-cinnamyl acetate          | 0.8-4.6   | 0.3-10.6  |
| eugenol                       | 68.6-87.0 | 2.2-13.3  |
| eugenyl acetate               | 1.0-8.1   | _         |
| 2-methoxy cinnamaldehyde      | _         | T-0.8     |
| coumarin                      | _         | T-0.8     |
| benzyl benzoate               | T-4.1     | T-1.0     |

**Cistus Oil:** (*Cistus ladaniferus*) A bush grown in the Mediterranean and used in the fragrance industry there, it has a eugenol content of 2.5% [40].

Clove Oil: (Eugenia caryophyllus) The best source in the world for eugenol. No matter where it's grown the contents are the same. No matter what part of the plant is used the eugenol content is the same. The three major clove oils of commerce are the bud (that thing on your spice shelf), the leaf and the stem oils. Each one is 80-90% eugenol. Table XVI will show you what I mean [41].

TABLE XVI. Comparative Chemical Composition of Clove Bud and Stem Oils

|                        | Clove       | Clove          |
|------------------------|-------------|----------------|
| Compound               | Stem Oil    | <b>Bud Oil</b> |
| alpha-cubebene         | 0.10-0.30   | 0.01-0.29      |
| alpha-copaene          | 0.11-0.16   | 0.12-0.17      |
| (E)-alpha-bergamotene  | 0.02-0.09   | 0.02-0.07      |
| methyl benzoate        | 0.02-0.24   | 0.04-0.13      |
| beta-caryophyllene     | 7.32-12.41  | 7.32-12.40     |
| alpha-humulene         | 0.96-1.43   | 0.96-1.44      |
| alpha-terpinyl acetate | 0.07-0.20   | 0.13-0.20      |
| caryophyllene oxide    | 0.13-0.48   | 0.16-0.34      |
| eugenol                | 76.42-84.82 | 73.50-79.73    |
| eugenyl acetate        | 1.54-8.04   | 4.54-10.72     |
| isoeugenol             | 0.14-0.20   | 0.14-0.23      |
| chavicol               | 0.04-0.65   |                |

**Dill Oil:** (*Anethum sowa*) One article on dill reported that an Indian sample contained 3.0% eugenol [42].

**Eucalyptus Oil:** (*Eucalyptus globulus*) None of the world's eucalyptus trees contain a trace of eugenol. . . except those cultivated in Madagascar whose oils contain 22.6% eugenol [43].

**Jasmin Oil:** Both the oil and the absolute produced from Jasmin has a eugenol content of approximately 3.0%.

**Pimento Oil:** (Eugenia pimenta DC, a.k.a. Pimenta officinalis L., a.k.a. Pimenta dioica) This is what is commonly called Allspice. The little, dried pimento berry looks like black pepper. It is indigenous to the Caribbean and Central America. Table XVII will show you what it's got [44].

TABLE XVII. Comparative Chemical Composition of Pimenta (a.k.a. Allspice) Berry Oils of Various Origins

| Compound                               | 1     | 2           | 3           | 4     | 5     |
|--|-------|-------------|-------------|-------|-------|
| alpha-pinene + alpha-thujene           | 0.3   | 0.27-0.52   | 0.05-0.60   | 0.14  | 0.15  |
| myrcene                                | 0.17  | 0.20-0.30   | 6.76-8.40   | 9.04  | 5.28  |
| alpha-phellandrene                     | 0.44  | 0.50-1.17   | _           | _     | _     |
| limonene                               | 0.36  | 0.14-0.22   | 0.23-0.30   | 0.26  | 0.36  |
| 1,8-cineole                            | 3.17  | 0.92-1.34   | 0.70-0.96   | 0.7   | 2.22  |
| beta-ocimene + gamma-terpinene         | 0.32  | 0.33-0.73   | 1.28-1.61   | 1.45  | 1.36  |
| p-cymene                               | 0.17  | 0.23-0.56   | 0.04-0.40   | 0.09  | 0.09  |
| terpinolene                            | 0.49  | 0.70-1.46   | 0.18-0.20   | 0.32  | 0.45  |
| linalool                               | 0.32  | 0.15-0.16   | 0.15-0.20   | 0.36  | 0.27  |
| beta-elemene + terpinen-4-ol           | 0.37  | 0.55-0.65   | 0.29-0.37   | 0.4   | 0.55  |
| isocaryophyllene + beta-caryophyllene  | 5.94  | 4.25-5.39   | 4.37-6.07   | 6.6   | 4.04  |
| allo-aromadendrene                     | 0.11  | 0.05-0.09   | _           | 0.08  | 1.3   |
| alpha-terpineol + gamma-/beta humulene | 2.22  | 1.60-1.83   | 0.73-0.92   | 0.97  | _     |
| alpha-selinene + beta-selinene         | 0.61  | 0.74-0.99   | 0.19-0.26   | 0.22  | 0.34  |
| gamma-cadiene                          | 1.31  | 0.77-0.86   | 0.27-0.30   | 0.45  | 0.19  |
| ar-curcumene                           | 0.8   | 0.31-0.21   | 0.12-0.14   | 0.09  | 0.07  |
| methyl eugenol                         | 0.46  | 2.90-13.11  | 14.91-28.08 | 5.62  | 27.5  |
| caryophyllene oxide + caryophyllenal   | 0.24  | 0.31-0.54   |             | 0.26  | _     |
| beta-caryohyllene alcohol              | 0.41  | 0.43-0.58   | 0.65-0.58   | 0.21  | -     |
| eugenol                                | 79.06 | 68.75-78.23 | 52.60-61.60 | 67.94 | 49.12 |
| chavicol                               | 0.05  | 0.24-0.46   | 0.38-0.59   | 1.02  | 1.21  |

[Note: 1=Grenada, 2=Jamaica, 3=Honduras, 4=Guatemala, 5=Mexico]

Sassafras Oil: This is a little squirrelly for me. Until I did the research for this book I was relying on one source for the info on the contents of sassafras oil [Guenther]. I guess a lot of people used his reference to allude that North American sassafras (Sassafras albidum) had a eugenol content of around 10%. Guenther took his research from the 1930-40's or earlier. Their methods of analysis back then were rather crude when compared to today. Yet I have seen the analysis results of essential oil components from very recent articles using NMR, GC and MS get thoroughly trashed by someone with a more sophisticated instrument.

What I'm trying to say is that people have been constantly proving and disproving the components of essential oils to this very day. And in all of the recent articles on sassafras oil I have found absolutely no detection of eugenol except in trace amounts. Interesting!

**Skinnia Laureola Oil:** The oil from the leaves of this plant are used as incense in Northern India. It was shown that the oil has a 1.62% eugenol content [45].

**Tejpat Oil:** (*Cinnamomum tamala*) The leaf oil of this relative of cinnamon has 78% eugenol [46]. This oil appears to be a rising player in the flavor and fragrance industry.

#### **ISOELEMICIN**

**Calamus Oil:** If you look at Table X in the Asarone section you will see that this oil can contain about 1.3% of this compound.

**Snakeroot Oil:** Another interesting compound in snakeroot oil. Isoelemicin just barely met my criteria for inclusion by being 1.0% of the oil [34].

**Tarragon Oil:** Yup, you saw correctly. That Table XIII in the Elemicin section lists isoelemicin as being in quantities of up to 10% of the "German" form of tarragon. It's funny because the author was not very clear on the specifics of what this German sample really was or where it really came from. I say funny because another study of "Russian" tarragon reported a concentration of *trans*-isoelemicin at 17.73% [46, vol. IV, p. 90]. (See also Table XXI in the Methylisoeugenol Section). You may recall that it was determined that there were only two types of tarragon: the regular one and the Russian one. Yet we are seeing one study (Table XIII) saying that Russian tarragon has no isoelemicin and another [47] saying it does. Could one be the other? Who knows? Who cares?!

#### ISOEUGENOL

Calamus Oil: Whereas most references to calamus oil showed it to contain isoeugenol in only trace amounts, I did find one in which the authors analyzed two samples of Indian-grown calamus and found concentrations of 2.28% and 25.02% [48].

Cassia Oil: Only the leaf oil of this cinnamon relative was shown to contain 1.83% [19].

**Basil Oil:** (*Ocimum basilicum*) Normally, basil oil does not contain isoeugenol. But one study showed that the stuff grown in the East Turkey region of Erzurum has a content of 2.04%.

Clove Bud Oil: A survey of Indian clove bud oil showed it to contain about 1.09% isoeugenol [49].

#### ISOMYRISTICIN

**Parsley Leaf Oil:** In 1991 a doctoral student did a very thorough study on the curly and flat leaf parsleys of Deutschland. He found that the flat leaf, and only the flat leaf, had an isomyristic content of 4.7-7.7% [50]. Pretty cool, huh?

#### METHYL CHAVICOL

Agastache foeniculum Oil: Another member of the Labiatae super family of plants which seems to have an answer to every chemical need. And the methyl chavicol chemotype of the family is this one and it happens to grow only in N. America. In Canada it grows from New Brunswick to British Columbia, and in the U.S. it grows from Iowa to Colorado. Two oil samples obtained from wild growing plants in Ames, Iowa and Ontario found identical methyl chavicol contents of 93% [51, vol. II, p. 54].

**Anise Oil:** (*Pimpinella anisum*) In general, anise seed oil contains anywhere from 1-5% methyl chavicol. The Egyptian and Turkish sources are typically the highest.

Basil Oil: (Ocimum basilicum) You can go to Table XIV in the Eugenol Section to get a good idea of the huge amounts of methylchavicol that are in this herb as well as to see the other components. While reading all the stuff on basil I found a lot of articles whose authors stressed the fact that basil has one of the most erratic and fluctuating chemical makeups of all essential oil plants. Table XIV readily demonstrates this if you were to look at how the methylchavicol and eugenol contents vary from country to country. I found another nice comparison study of commercially available basil oils whose data I'm including in Table XVIII [52]. This should give you a little more to draw on so that you can make a more informed decision about this oil.

# TABLE XVIII. Major Component Percentages of Commercially and Experimentally Available Basil Oils of Various Origins

|                           | Group 1     |             | Group 2     |             | Group 3     |             |
|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Compound                  | С           | E           | С           | E           | С           | E           |
| 1,8-cineole + cis-ocimene | 0.42-4.60   | 0.05-2.10   | 3.40-4.75   | 2.70-13.60  | 0.11-8.10   | 1.20-2.70   |
| linalool                  | 0.50-16.86  | 0.20-16.80  | 43.80-52.00 | 23.00-75.40 | 41.90-54.37 | 63.80-74.20 |
| methyl chavicol           | 74.00-89.00 | 68.90-88.60 | 6.20-31.80  | 0.40-43.60  | 2.38-26.56  | 0.60-0.90   |
| methyl cinnamate          | 0.05-0.10   | 0.05-0.10   | 0.15-0.16   | 0.05-15.50  | 0.05-0.34   | 0.05        |
| eugenol                   | 0.30-6.60   | 0.10-1.00   | 3.40-8.00   | 0.10-11.20  | 5.90-19.20  | 7.90-8.50   |

[Note: C=commercial, E=experimental; Group1=Thailand, Reunion, Comoro Islands, India, Pakistan, Madagascar, Vietnam and France; Group2=Italy and Yugoslavia; Group3=Morocco, S.Africa, and Egypt]

**Chervil Oil:** (Anthriscus cerefolium) A very interesting and rare essential oil. I will discuss it fully in the Osmorhizole section. This oil is made up of 75.1% methyl chavicol [53].

*Collinsonia anisata:* Another North American Labiatae plant that grows exclusively in South Carolina, Alabama, Georgia and Florida. Its oil is 80% methyl chavicol [54].

**Fennel Oil:** (Foeniculum vulgare) You can check out Table II in the Anethole section for a good composite of bitter and sweet fennel oils. An even better reference can be seen Table XIX which is the consolidated data of a global survey of fennel seed oil with the sole objectives for quantification being the fenchone, anethole and methyl chavicol contents [2, vol. V, p. 133].

TABLE XIX. Major Component Comparison of Fennel
Oils From Various Origins

|             | Oil Content | Yield   | Fenchone | (E)-anethole | Methyl chavicol |
|-------------|-------------|---------|----------|--------------|-----------------|
| Cultivar    | (%)         | (kg/ha) | (%)      | (%)          | (%)             |
| Turkish     | 2.43        | 131.9   | 2.85     | 83.31        | 5.24            |
| Polish      | 2.26        | 28.24   | 17.52    | 69.02        | 3.32            |
| French A    | 3.98        | 91.55   | 13.87    | 75.47        | 3.05            |
| Argentinian | 3           | 59      | 8.59     | 79.89        | 6.44            |
| Hungarian   | 2.33        | 38.67   | 16.32    | 70.71        | 4.03            |
| French B    | 3.88        | 54.38   | 16.62    | 71.35        | 3.01            |
| Albanian    | 2.95        | 40.7    | 15.82    | 84.08        | 4.34            |
| Moroccan    | 2.57        | 96.65   | 0.86     | 38.82        | 7.47            |
| Yugoslavian | 2.82        | 41.59   | 13.58    | 38.82        | 3.82            |
| Egyptian    | 2.71        | 120.9   | 1.76     | 40.63        | 47.15           |

**Hyssop Oil:** (*Hyssopus officinalis*) This flavoring agent has been shown to contain about 1.3% methyl chavicol [55].

**Star Anise Oil:** Table IV in the Anethole Section shows the methylchavicol content from two of the biggest oil producing nations. It is disturbing to note that a study on the Vietnam and Chinese oils a year earlier showed almost exactly opposite numbers [56, vol. III, p. 103]. By this I mean that Vietnam was shown to have approximately 6% and China to have none. I'm confused. Most likely one or both have the goods.

**Tarragon Oil:** (*Artemisia dracunculus*) You can see in Table XIII from the Elemicin Section that, aside of any other goodies, "regular" tarragon oil is mostly made of methylchavicol (73-82%). It was no mistake that the aberrant forms of tarragon ("Russian," "German") did not show any methylchavicol. Other studies show little-to-none as well [57].

**Wormwood Oil:** (*Artemisia annua*) This oil was used in the narcotic alcoholic drink called absinthe. It has a methylchavicol content of 3-4% [58].

#### METHYLEUGENOL

**Basil Oil:** (*Ocimum basilicum*) As you can see in Table XIV from the eugenol section, there doesn't seem to be any methyl eugenol in any basic oil. But the data from that multiple source table and from Table XVIII, are refuted by just as many references that say it *does* exist. One study showed that it was 1.6% of oil from the stem of Taiwan basil (a geographical source that purports an 84% eugenol content by the way) [59, vol. III, p. 232]. From the Ibadan region of Nigeria is a content of 2.51% [60, vol. IV p.72]. Basil cultivated in the Erzurum region from Eastern Turkey has a reported content of 9.57% [61, vol. IV p. 114] Certain Fijian chemotypes show up to 25% [62, vol. V p. 38]. Yadda, yadda, yadda. And just to show you how morbidly confusing and fickle the reports on basil have been, I give you Table XX which gives a component breakdown of various parts of both regular basil and a species variety called minimum [2, vol. III p. 182]. Ido not know the origin. Possibly Singapore. I just don't know nothing anymore. Nothing, you hear!

## TABLE XX. Comparative Chemical Composition of the Leaf, Stem and Flower Oils of Basil

|                        | O. basilicum |       |        | O. basilicum var. minimum |       |        |
|------------------------|--------------|-------|--------|---------------------------|-------|--------|
| Compound               | Leaf         | Stem  | Flower | Leaf                      | Stem  | Flower |
| alpha-pinene           | 0.28         | 0.35  | 0.21   | 0.22                      | 0.51  | 0.43   |
| camphene               | 0.01         | _     | 0.01   | 0.01                      | 0.04  | _      |
| beta-pinene            | 1.18         | 0.06  | 0.3    | 0.27                      | 0.3   | 0.65   |
| sabinene               | 0.33         | 0.35  | 0.2    | 0.01                      | 0.12  | 0.28   |
| myrcene                | 1.17         | 0.37  | 0.24   | 0.57                      | 0.74  | 0.91   |
| alpha-terpinene        | 0.04         | 0.18  | 0.04   | 0.01                      | 0.03  | _      |
| limonene               | 0.69         | 0.15  | 0.93   | 0.46                      | 0.54  | 0.41   |
| beta-phellandrene      | 0.1          | 0.44  | 0.04   | 0.01                      | _     | _      |
| 1,8-cineole            | 8.05         | 11.2  | 2.59   | 2                         | 0.77  | 4.03   |
| gamma-terpinene        | 0.37         | 0.8   | 1.57   | 0.18                      | 0.04  | 0.12   |
| ocimene                | 4.02         | 0.07  | 2.88   | 1.56                      | 0.96  | 4.22   |
| p-cymene               | 0.07         | 0.06  | 0.07   | 0.01                      | 0.1   | _      |
| terpinolene            | 0.09         | _     | 0.09   | 0.04                      | 0.03  | -      |
| citronellal            | 0.01         | 0.01  | 0.04   | _                         | 0.15  | _      |
| linalool               | 6.78         | 1.6   | 24.63  | 0.74                      | 0.84  | 1.47   |
| methyl thymol          | 0.44         | 0.15  | 0.27   | 0.14                      | 0.22  | _      |
| caryophyllene          | 6.06         | 7.18  | 6.2    | 5.85                      | 12.22 | 9.92   |
| terpinen-4-ol          | -            | 0.62  | _      | _                         | -     | _      |
| methyl chavicol        | 35.03        | 4.91  | 41.8   | 17.72                     | 9.02  | 27.69  |
| citronellyl acetate    | 0.14         | 0.34  | 0.31   | 0.07                      | 0.2   | 0.02   |
| neral                  | 0.3          | 0.02  | 0.13   | 0.35                      | 0.8   | 0.43   |
| alpha-terpineol        | 0.12         | 0.05  | 0.15   | 0.15                      | 0.45  | 0.02   |
| alpha-terpinyl acetate | 1.15         | 8.16  | 2.34   | 1.12                      | 2.94  | 2.77   |
| geranial               | 0.72         | 1.66  | 0.88   | 0.88                      | 2.89  | 0.7    |
| citronellol            | _            | 0.05  | _      | _                         | 0.17  | _      |
| nerol                  | _            | 0.02  | 0.01   | _                         | 0.1   | -      |
| geraniol               | -            | 0.01  | 0.02   |                           | 0.07  | _      |
| methyl eugenol         | 30.53        | 3.36  | 4.48   | 64.25                     | 52.23 | 42.9   |
| eugenol                | 0.35         | 53.08 | 5.91   | 0.44                      | 3.54  | _      |

**Bay Oil:** It's our old friend Bay again. But this time we are talking exclusively about Bay Laurel, a.k.a. Mediterranean Bay, a.k.a. Laurel Leaf or just plain old Laurel (*Lauris nobilis*). There is little doubt about methyleugenol's presence in this oil. Every source of laurel oil has between 5-9% content.

Calamus Oil: Methyleugenol was found in up to 2.05% in an early survey of Indian sources [48], and a similar study of multiple sources in Japan showed an average of up to 1.8% [63].

Cassie Oil: (Acacia cavenia) An oil from Italy that has 1.3% content [64]

**Myrtle Oil:** (*Myrtus commonis*) Hey, I've heard of "Myrtle." Apparently all global sources contain anywhere from 3-8% methyleugenol.

**Pimento Oil:** All ya gotta do is look at Table XVII in the Eugenol Section to get the scoop.

**Pistacia Oil:** (*Pistacia lentiscus*) No, not "pistachio." The oil of this Mediterranean plant's leaf or fruit is about 2.0% [65].

**Pteronia Oil:** (*Pteronia incana*) Don't know what it is. Don't know where it is. But one report has it containing 7.2% methyleugenol.

**Snakeroot Oil:** (*Asarum canadense*) Two studies confirmed that this oil is 42-45% methyleugenol [34].

**Tarragon Oil:** Table XIII in the Elemicin Section shows again that methyleugenol is part of the goodies in the tarragon oils.

## METHYLISOEUGENOL

Calamus Oil: (Acorus calamus) The two studies we have previously noted [48, 63] show that various Indian sources show contents of 0.0-2.79%, and various Japanese grown sources as having 2.4 - 48.9% methylisoeugenol. Both cis and trans isomers are present but the trans outnumbers the cis by 20:1.

**Citronella Oil:** (*Cimbopogon winterianus*) Both the Sri Lankan and Java type oils were found to contain methylisoeugenol in concentrations of 10.1 - 11.3% [66].

Narcissus Oil: (Narcissus tazetta) Has methylisoeugenol in 2.40% concentrations. [68]

*Orthondon methylisoeugenoliferum*: Another crazy Labiatae species quoted by Lawrence [2, vol. IV, p. 204] which is just an unusual chemotype of a normal Orthondon plant that went haywire. I don't know where or if these plants exist. But this particular one has a reported oil content of 55%.

**Tarragon Oil:** Yup, those same tarragon oils from Table XIII. In that study only "German" tarragon has any appreciable methylisoeugenol content with 1.89%. However, another study [69] showed that four different samples of "Russian" tarragon grown in the U.S. had contents of 2.79 - 2.292%.

I am not supplying the quotation marks around all these "French," "German" and "Russian" terms. The authors of all these articles did. Even to this day it seems that the essential oil industry is not sure what's up. It seems that some sources are passing off "Russian" tarragon as the more "preferred" "French" tarragon or are adulterating samples with it. I really wouldn't know. It seems that two different varieties would not smell or taste the same since one is predominately methylchavicol and the other is a mix of high-powered propylbenzenes. Apparently there must be some similarity or it wouldn't be such a burning issue with these guys.

But it may also be that the perfumists and flavorists are having such a tough time defining the tarragons because even the purported "Russian" variety can differ so radically from plant to plant that it would seem that two or more completely different varieties must exist. The perfect example is the component breakdown of two of the "Russian" samples studied in ref. 69. You can see this in Table XXI. The two tarragons are obviously not the "French" variety because they are both equally devoid of methylchavicol. But one has some elemicin and methyleugenol yet the other has an unbelievable 60% elemicin. The tarragon family has left me hopeful yet worried all at the same time.

# TABLE XXI. Comparative Chemical Composition of Two Samples of "Russian" Tarragon Oil

|                                 | 1     |       | 2     |       |
|---------------------------------|-------|-------|-------|-------|
| Compound                        | F     | D     | F     | D     |
| alpha-thujene                   | 0.01  | 0.01  | 0.04  | 0.01  |
| alpha-pinene                    | 0.45  | 0.64  | _     | 0.23  |
| camphene                        | 0.17  | 0.2   | 0.03  | 0.1   |
| beta-pinene                     | 0.52  | 0.55  | _     | 0.15  |
| sabinene                        | 46.96 | 46.78 | 11.07 | 27.73 |
| myrcene                         | 2.48  | 2.41  | 0.64  | 1.1   |
| alpha-phellandrene              | 0.03  | 0.03  | 0.04  | 0.08  |
| alpha-terpinene                 | 0.78  | 0.93  | 0.15  | 0.39  |
| limonene                        | 0.17  | 0.17  | 0.1   | 0.15  |
| 1,8-cineole                     | 0.21  | 0.22  | 0.09  | 0.13  |
| cis-ocimene                     | 4.36  | 4.1   | 1.78  | 2.02  |
| trans-ocimene + gamma terpinene | 4.05  | 4     | 5     | 5.31  |
| p-cymene                        | 0.03  | 0.03  | 0.07  | _     |
| terpinolene                     | 0.31  | 0.35  | 1.43  | 1.38  |
| trans-allo-ocimene              | 0.02  | 0.02  | 0.02  | 0.03  |
| cis-allo-ocimene                | 0.01  | _     | 0.02  | 0.02  |
| linalool                        | 0.18  | _     | 0.11  | 0.12  |
| terpinen-4-ol                   | 2.39  | 2.58  | 1.36  | 1.58  |
| citronellyl acetate             | 1.38  | 1.11  | 2.02  | 1.58  |
| methyl chavicol                 | 0.06  | 0.06  | 0.23  | 0.19  |
| nerol                           | 0.08  | 0.04  | _     | _     |
| geraniol                        | 0.05  | 0.03  | 0.07  | 0.06  |
| methyl eugenol                  | 8.36  | 8.17  | 10.17 | 5.38  |
| eugenol                         | 0.15  | 0.71  | 0.06  | 0.13  |
| methyl isoeugenol               | 2.79  | 2.92  | 0.03  | 0.06  |
| elemicin                        | 0.49  | 0.55  | 59.69 | 44.77 |
| trans-isoelemicin               | 17.73 | 17.22 | 0.26  | 0.26  |

[Note: F=fresh leaves, D=dried leaves]

## **MYRISTICIN**

**Dill Oil:** (Anethum graveolens) It seems that myristicin does not show up in every dill sampling. Some studies of the oil taken from the herb show 1-2%, some show none, yet some are very high. German-grown dill herb oil seems to be the lowest but another popular source, Finland, typically has a rather high myristicin content. Table XXII shows a typical sampling of Finnish dill herb oil [70].

TABLE XXII. Chemical Composition of Dill Herb Oil

| Compound                | 1     | 2     | 3     |
|-------------------------|-------|-------|-------|
| alpha-pinene            | 2.64  | 2.29  | 1.87  |
| beta-pinene             | 0.32  | 0.21  | 0.11  |
| undecane                | 0.22  | 0.16  | 0.2   |
| delta-3-carene          | trace | trace | trace |
| alpha-phellandrene      | 34.43 | 47.38 | 25.95 |
| alpha-terpinene         | trace | trace | trace |
| limonene                | 3.7   | 3.47  | 10.21 |
| beta-phellandrene       | 9.43  | 9.42  | 7.34  |
| gamma-terpinene         | 0.17  | trace | 0.33  |
| rho-cymeme              | 6.6   | 4.7   | 5.03  |
| terpinolene             | 0.06  | trace | trace |
| cis-3-hexenyl acetate   | 0.23  | 0.31  | trace |
| cis-3-hexenol           | 0.13  | trace | 0.33  |
| trans-2-hexenol         | 0.6   | 0.13  | 0.2   |
| 3,9-epoxy-p-menth-1-ene | 10.93 | 15.5  | 31.5  |
| terpinen-4-ol           | 0.2   | 0.15  | 0.75  |
| alpha-terpineol         | 0.47  | 0.39  | 0.16  |
| carvone                 | n.d.  | trace | 2.47  |
| thymol                  | 0.35  | 0.33  | 0.35  |
| carvacrol               | 0.07  | 0.13  | 0.09  |
| myristicin              | 7.63  | 2.81  | n.d.  |
| apiole                  | 4.32  | 2.85  | 0.7   |

Of course there is always the oil from the roots of this plant which has a monster myristic in content which you can see in Table XI in the Dillapiole Section. There is also the oil from the Indian variety of dill (*Anethum sowa*). Though typically low in myristic in, a study of various commercial sources in India showed chemotypes ranging from 0.2 - 20.3% [71].

Celery Oil: (Apium graveolens) The base for making sauce stocks in French cooking is called a mirepoix, which is a mixture of chopped aromatic vegetables. Two of the mandatory ingredients are carrots and celery. We're about to get to carrots in a minute, but let's talk about celery first.

Go ahead and take a chomp out of some celery stalk and leaves. That's quite a powerful "aromatic" flavor. Well, aside of the monster apiole content of the leaves and stalk, there is also a myristic content of 1.9% [72]. Remember, this is oil from the plant, not the seed.

Fennel Root Oil: You can see in Table IX from the Apiole Section about the high myristicin content of the root oil.

**Nutmeg Oil:** (*Myristica fragrans*) The old standby as the myristicin source. And yes it is in there but concentrations vary widely amongst the various geographical sources. Table XII from the Elemicin section shows that the Asian sources contain the most. Sri Lankan nutmeg is rather low with an average of 3.8% [73]. Malaysian nutmeg oil has about 5.7% myristicin [74]. Don't throw away that nutmeg leaf either! The oil from the leaves of the Indonesian nutmeg tree have a 10% myristicin content as well.

Mace Oil: Nutmeg's spice cousin also has myristicin in about 3.8% concentration.

Orthondon myristiciniferum Oil: Another Labiatae misfit made mention only by Lawrence [2, vol. IV p204] and having a content of 80%.

Parsley Oils: This is the ultimate source of myristicin today. Cheap, plentiful and packed with myristicin. In Tables V, VI, VII and VIII from the

Apiole Section you can see the consistent and humongous myristicin contents of various types of parsley oils (seeds, leaves and herbs), various types of parsley (curley and flat leaf) and various global origins.

**Parsnip Oil:** (*Pastinaca sativa*) Yes, parsnips. A root vegetable. But first a little story.

The Merck Index lists carrots as a source of myristicin. But I could find no source that had characterized the chemical components of the carrot root. All everyone seemed interested in was the oil from the carrot seed. So I'm going through the literature and here's this little report that says parsnip roots have an oil that contains 17 - 40% myristicin! Zoiks! As a semiprofessional chef, I've at least heard of parsnips. So I go down to the local Albertson's grocery store and buy a 1-lb. bag of parsnips for about \$1. They look like scrawny carrots and are white in color. So I take a bite out of one and — whoa! — does it taste just like a carrot, although 10 times stronger. You starting to get the inference? By the way, a very common spice used to enhance the flavor of parsnip dishes is nutmeg. Circle of life, folks. Circle of life.

#### OSMORHIZOLE

(a.k.a 1-Allyl-2, 4-Dimethoxybenzene)

This was such a charming little find. In the book *The Illustrated Encyclopedia of Essential Oils* by Julia Lawless, she claims that the oil of chervil (a European spice plant) has this compound. Well, the literature backs it up. Chervil oil (*Anthriscus cerefolium*) is made up primarily of just two things: 75.1% methylchavicol and 22.3% osmorhizole [53].

But I am sorry to say that I can find no commercial source for this oil on earth. I mean to say I have looked everywhere! This is perplexing because chervil is not uncommon at all. I even have some growing in my garden. Tastes funny, too. I'm sure you can see that this unique allylbenzene has extraordinary potential.

## PHENYLACETIC ACID

Jasmine Oil: Has a Phenyl acetic acid content of 15.68% [75].

# PHENYLETHYLALCOHOL

This compound is a mainstay in many floral extracts. Very expensive floral extracts. The following two sources have the highest concentrations.

Carnation Oil: Has a 7% content.

Rose Oil: Averages a phenyethyl alcohol content from 37 - 50%.

## SAFROLE

**Betel Leaf Oil:** You see those cultivars listed in Table III of the Anethole section? Well, non-tabular data from that study showed that the safrole content in these oils ranged from 6.45-45.34%.

**Camphor Oil:** (*Cinnamomum camphora*) The next best source of safrole on this planet next to sassafras oil. But you need a little bit of education on the subject to know what you're getting into.

Over in China, Thailand, Japan, etc. grows the camphor tree. They chop up the bark, leaves and whatever. They then steam distill the stuff to get a crude camphor extract. When this extract cools, a motherlode of white camphor (the actual chemical compound called camphor) crystals form. These crystals are separated by filtration and represent about 50% of the crude extract. The other 50% that doesn't crystallize is what is termed as camphor oil. It is this oil that is the camphor oil of commerce. This crude oil is also what is technically called the "essential oil of camphor."

Hey! Not so fast! It's not that simple. You see, for some reason, the world's camphor trade likes to take that crude camphor oil and fractionally distill it into its component parts of which there are three:

- (1) White camphor oil: The first distilled fraction that is clear to clearwhite and that has a boiling range of 160-185C. It is mainly composed of cineoles.
- (2) Brown camphor oil: (a.k.a. yellow camphor, a.k.a. red camphor oil) The middle fraction with a boiling range of 210-250C. It is 80% safrole.
- (3) Blue camphor oil: The third and final fraction with a boiling range of 220-300C and a high sesquiterpine content.

All three oils are sold commercially and are legal and unwatched. Some companies sell brown camphor oil as simply that: "brown camphor oil." But the majority of companies sell it under the cryptic name "camphor 1.070." This is because the specific gravity of the brown oil is 1.070. You should also be aware that places selling "synthetic sassafras oil" are actually selling brown camphor oil.

If you cannot find the brown oil then simply purchase the crude camphor oil. This again is the oil before it is fractionated into its three parts. The percentage of safrole in this oil is about 20%. But be careful here. Make

sure you ask the essential oil company rep to verify that the camphor oil is the crude unrefined camphor oil. Many places that sell "camphor oil" are actually selling the white oil portion but are just calling it "camphor oil."

There are lots of varieties of camphor trees whose safrole contents can skyrocket above that of the common *Cinnamomum camphora*. Many are from Taiwan and Japan. Names to look for include:

- (1) Ohba-kusu
- (2) Pha-Chium (*Cinnamomum micranthum* Hayata)
- (3) *C. camphora* subsp. *formosana* var. *occidentalis* sub var. *safrola* Hirota (West safrole tree)
- (4) *C. camphora* subsp. *formosana* var. *orientalis* sub var. *safrola* Hirota (East safrole tree)

*Illicium parviflorum:* A scrawny shrub growing in the woods, swamps and coastal plains of Eastern Florida and Georgia [75]. The leaf oil of this plant is 90% safrole. And, no, I still don't know what this thing looks like or where specifically it is located.

**Nutmeg Oil:** Table XII in the Elemicin Section is fairly representative of safrole content in this oil. Some other Asian locales may have a little more or less but % content doesn't seem to get any higher than 7.0%.

*Ocotea cymbarum* Oil: Commonly known as "Brazilian Sassafras," this tree grows in the Santa Catarina state of Brazil. The oil contains 85%-90% safrole [76, vol. III, p. 155]. In Table XXIII you can see the safrole content from all parts of the tree.

TABLE XXIII. Comparative Chemical Composition of the Oils of Various Parts of the Ocotea Cymbarum Tree

| Compound     | Stem wood<br>Oil | Bark<br>Oil | Leaf<br>Oil |
|--------------|------------------|-------------|-------------|
| alpha-pinene | 1.25             | 0.32        | 1.49        |
| limonene     | 0.91             | 2.89        | 4.99        |
| 1,8-cineole  | 0.94             | 1.8         | 1.78        |
| camphor      | 2.9              | 33.26       | 30.67       |
| safrole      | 71.15            | 44.52       | 44.97       |

Take a look at the only significant contaminants given. Nowhere in this study, or in any of the five others that I have read, is eugenol detected except in trace amounts. And although the safrole contents mentioned in Table XXIII seem low when taken in the context of separate plant parts, it apparently works itself out when combined or distilled commercially. Because all commercial samples analyzed showed 95% safrole.

**Sassafras Oil:** The North American sassafras tree is called *Sassafras albidum* and can grow anywhere east of the Mississippi in the United States. The safrole content is 70-80%. In Asia, especially Vietnam, grows *Sassafras officinalis*. It can contain up to 95% safrole.

# 2,3,4,5-TETRAMETHOXYALLYLBENZENE

**Parsley Oil:** As you can see in Tables III and IV from the Apiole section, there is a ton of this supercompound in the green parts of parsley. Yowza!

# 1,2,4-TRIMETHOXYBENZENE

**Hyacinth Absolute:** An absolute is an alcohol extraction of a plant part. In this case, the flowers of *Hyacinthus orientalis*. It was 3.0% of this compound [76, vol. I (1978), p. 5].

## VANILLIN

I do not see any good reason to get this molecule from nature. Nature sucks at making it. The few natural sources I have for it suck as well. But as a pure chemical it is easily manmade and much more affordable to obtain. The best part about obtaining this stuff from man is that it is one of the most used confection and aroma compounds on earth. It ain't ever gonna be illegal. It ain't ever gonna be watched. And if it ever is, then. . . well. . . by God, they will have to remove my cookie and ice cream cone from my cold dead hands! (That's Texan talk for ya, folks.)

*Skimmia laureola* Oil: A North Indian shrub whose leaves are burned as incense there. The leaf oil has 4.6% vanillin [77].

Vanilla Bean Oil or Extract: Way too pricey. Plus there's only about 2% vanillin in the yucky black liquids. Fuhgeddaboudit!

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# Spiceworld

"Spice up your world! . . . la, la, la . . . Every boy, every girl! . . . la, la, la . . . I see you — HOLD TIGHT!" Oh Sporty Spice! When will we ever be together? Anyway, where does one go to get essential oils, plant products and other concentrates? The answer is literally 'everywhere'. You've got your hippie health food stores, hippie aromatherapy companies, flavoring companies, fragrance companies and chemical companies (just to name a few). And I'm gonna cover them all, baby!

But let's get a grip on what we're really talking about here. We've previously covered a lot of "scary" territory with the chemicals part of this book. There is an inherent risk when dealing with companies that are exclusively reagent and research chemical oriented. That is not the case with the essential oil and fragrance chemical companies. It is a whole different ball game, bubba!

What these companies sell are fragrance and flavor materials. They are not illegal. They are not watched. The industry is not policed. But let me qualify this. Yes, some of the companies that sell essential oils and extracts also make aromatic chemicals. And, yes, some of those chemicals are watched or restricted. It is the nature of the industry that some chemicals of this type are included in the product list of some companies. Even watched/restricted chemicals have uses in this world so people are gonna sell them.

But these naughty chemicals make up just a fraction of the repertoire of these companies. And it is that fact that makes this "industry of natural chemicals" very, very different from the "industry of chemicals." Most companies listed here offer just essential oils, extracts and compounds purified from the oils. These companies are totally safe to buy from. They sell no watched, restricted or illegal products. They know it. We know it. This attitude spills over to those companies that actually manufacture chemicals. The chemicals, although highly useful to you and me, are just flavoring and fragrance compounds. They are used in everyday products. And, aside of the dilute interspersion of the odd restricted chemical, are perfectly legal to buy. These giants of natural chemicals know it. And we know it.

To truly understand what I'm yapping about all one needs to do is see what it is that these companies do and do not sell.

What these companies do not sell:

- Solvents
- Inorganic Acids (HI, HCl, H2S04)
- Bases
- Glassware
- Catalysts
- Reagents

# What they do sell:

 Every organic, phenol, aldehyde, alcohol and benzaldehyde known to man.

Can't you see that, aside of the unavoidable precursor here and there, these companies sell nothing (I mean nothing!) that the government or DEA has any interest in or control over.

I welcome you to buy with impunity from any and all of these companies.

They are as eager to sell to you as any other chemical company but more so. With nothing to worry about they are open to most customers. I have found virtually no resistance nor authorization requirements. Products and chemicals are sent same day; many via COD. Of course, a business front on your part is still in effect.

I am also begging you to order catalogs from the company of your choice. You will be astonished at the scope of chemicals you have access to in this "alternative" chemical industry.

## ESSENTIAL OIL SOURCING

Here is where all of that source info I gave you in the **Essential Oil** section will come into play. The essential oil industry is very keen on the sources they get their oils from. This is especially true with the aromatherapists and hippies.

The hippies are trying to cure themselves with these oils and they are often very specific with the types of oils they use and the compounds that these oils contain.

As you saw in the **Essential Oils** section, there can be a great degree of difference in content between oils from different regions, or between oils of different species. Believe you me, this variation has not gone unnoticed by the aromatherapists and by the essential oil industry as a whole. They are very serious about the origins of their oils and will readily supply the info. Many pride themselves on having multiple contacts with growers of any region and can readily source for you a particular region's oil.

You can use this to your advantage. I have just armed you with some of the most exclusive knowledge in existence regarding essential oils. You'll be talkin' like a pro when you lay this shit on the chem company's sales rep. And by all means, be a particular and picky customer. This is your health or your company's bottom line that is at stake.

Another advantage about the particularity of the essential oil industry and its customers is that it is very common for a company to do specific lot analysis of its oils. This takes the guesswork out of things because you will see the detailed component breakdown of the oil you are buying. Many companies offer on request (or just flat out boast about having) gas chromatograph (GC) analysis sheets for their customers. Shit yes, one should definitely ask for lot analyses!

# **IMPORTANT**

One last reminder. Aside of any obvious DEA list chemicals or precursors, there are three (and only three) non-single-entity substances that carry any form of scrutiny. And these three are:

- · Bitter Almond Oil
- Ocotea Cymbarum Oil
- · Sassafras Oil

Still perfectly legal to buy in whatever amounts you want. The only catch is that the company you buy it from has to keep a record of the purchase for DEA inspection. One company (Liberty Natural Products) says that they just mail the purchase records to the DEA at the end of each month. This sounds reasonable to me since I would imagine that it would mean that the DEA would not have to perform its intrusive little routine of going thru the firm's records at their place of business. Another company (Creative Fragrances) said that they just let the DEA come in and take a look at the sassafras/almond purchases. This happens once every 1-3 months.

Now don't go taking the examples of the preceding two companies as the defacto way sassafras oil is handled. I have seen very different policies applied to its sale from many different companies.

I know that the smallest amount that Creative Fragrances sells is one pound. The fact that they sell such large quantities may force them to automatically report all sales simply because all sales fall above the

reportable "threshold." Liberty Natural Products, however, sells sassafras oil sizes as small as one ounce. Yet they flat out told me that they submit a report of all sales regardless of size. I asked them if the DEA had set a reportable limit and they said that DEA has refused to tell them what the "limit" is and that they (the DEA) simply want a list of all sales.

I later called a heavy hitting industrial supplier by the name of Berje. A lady sales rep at this company told me that all sassafras oil purchases from her company are withheld for seven days in order for them to give the names and particulars of the buyers to the DEA who can scrutinize the sale before it is finalized and/or to contact the potential buyer to find out what's up. Again, this may just be the policy for big companies such as Berje.

BUT, all this clashes with the innumerable companies that I found whom did NOT report sales. Many companies as big and as connected as Berje were perfectly willing to sell me sassafras. Most either knew nothing about any restrictions or just did not care. I also know that almost every one of the stores in the **Aromatherapy Companies** section do not have any reporting policy at all. Yet some sell sizes of up to a pound or more. I can also vouch for the fact that many stores in my fair city sell 4oz bottles of sassy right off the shelves. (Hmm. . . that reminds me of something I have to do. . . be back in a sec.)

All of this would be academic if one were to know the specific threshold one could buy sassafras oil at without having to be reported. One confidant told me that a buddy of hers that sells items such as this was told that the threshold is now 4 ozs. Yet another has told me that 16 ozs is the limit. And yet another has told me 4 Kg. I figure if anyone should know this it should be me. But after all the research I have done for this book and all the work I have put into it, I have not found this supposed threshold out. Right up to the day that I could no longer put off sending this book to press could I find out this threshold limit. It is the greatest shame for me that I cannot give you such a simple piece of information.

Believe me when I say I have tried. The DEA does not like to talk. And even when I got someone on the line they played so ignorant (was it an act?) as to predispose incompetency. Not one person knew a thing about these sassafras oil threshold limits. Even the guys in the Diversion Control whose job it is to know such things could not answer my simple questions. What this is, folks, is another example of the DEA's repeated violation of the Freedom of Information Act. For years the FIA has forced all branches of government to disclose their policies to the public. The DEA has not done so.

I have monitored the FIA section of the DEA's homepage (watch out folks! I'm starting to ramble here) for well over a year and it has remained "under construction" ever since. All the other FIA sites for every single government department and agency have been published. Every one of 'em. Except for the DEA. This goes hand-in-hand with the mysterious "Special Surveillance List" I mentioned in the Who Watches The Watchmen section of this book. As you may recall, the DEA coaxed legislation from Congress to allow them to compile this special list. Obviously the DEA had in mind the chemicals and equipment that they wanted to monitor or they would not have requested Congress for such a provision. Yet here we are - nearly two years after the passage of the MCA - and the DEA has not released this list. Did they coerce legislation for which they had no intention of using? Hardly. They absconded the right to make the list and have simply refused to release it. They will hide behind their various 'under construction' policies when, all the while, they will be scrutinizing the American people with their 'constructed' lists while not letting the people know what they are being scrutinized over.

Whew! Sorry but I had to make that observation somewhere in this book. This seemed as good a place as any. Anyway, it's just my little theory. What do you think? As for me I'm tired of thinking about it. And it doesn't get us any closer to discovering the true nature of the scrutiny sassafras oil is under.

So for now lets just go by what we know and see. I know that it is not illegal to own sassafras oil. I know that I could buy as much as I want. I know I can get small amounts from any local store or retail mail order company without my name being put on a list. And as far as big purchases go and whether or not something is 'watched', my longstanding personal policy still presides, and that is: I couldn't give a damn whether something was "watched" or not. As long as I can buy it, or someone else can buy it for me, then that shit is gonna be mine. Word to your mother!

# **Aromatherapy Companies**

Hippies, high prices and power crystals. Hell on earth! But their stores are in every town and are the first line of purchase for essential oils.

There are three drawbacks to these places. Usually small product sizes, high prices and, most importantly, many of them do not stock the more, er, interesting essential oils. Let me explain. . .

About 20 or so years ago, a few scattered reports in the literature stated that there were "potential" carcinogenic properties of a select few essential oil comounds. To be more speciaic: safrole, myristicin and asarone. It has not escaped my attention that these three compounds happen to have the greatest potential as psychedelic amphetamines. Around 1985, the year that a drug known as ecstasy was banned, safrole (ecstasy's precursor) began to receive an inordinant amount of new scrutiny from scientists. Keep in mind that almost 90% of U.S. public research is funded by the government. After 1985, safrole/sassafras oil progressed from being a suspected carcinogen to full-blown carcinogen. As of 1998 it is also termed as toxic as well as being carcinogenic. I suspect it will jump to "lethal" status by the year 2000. At which point we will all retroactively die!

It is, to say the least, fascinating to find that flavors and fragrances used by mankind for centuries have, in fact, been knocking us off right and left. In actuality, I find the tactics of this campaign cowardly and reprehensible. I have worked on many, many carcinogenic studies and have a pretty good working knowledge of the biology involved and the appropriateness of needing to do the research in the first place. Most of the studies fail these criteria miserably.

As I am so immersed in this whole field I can see all this for what it really is. But our friends in the aromatherapy field have not. The aromatherapy hippies use essential oils to cure themselves of hippie diseases and to overall enhance their hippie lives. But all this talk of death and dismemberment has made them as nervous as a hippie at a job fair. And the outcome has been that many stores have simply stopped selling sassafras and calamus oils which are the principle sources for safrole and asarone respectively.

But don't fret. There are plenty that still sell these genocidal substances. Just because one cannot use the oil topically on one's skin doesn't mean it has no value. Sassafras oil, like most essential oils, smells great. Gallons of it makes a home smell fantastic!

Even if a store doesn't have the oil you want you can bet your ass they can order it for you. Just ask! They can get it for you. And if you don't like the sizes they offer, ask for bigger ones. They will oblige. After all, selling you stuff is how they make money. Simple economics, folks.

If you still feel trepidations ordering suspect oils or if you ever get one of those "Exactly what are you needing this for?" kind of questions, then let me give you the ultimate reason. All of the allylbenzenes (especially the ones with methylenedioxy ring structure) have been proven to be excellent insecticides. The literature abounds with proof of this fact. And as it so happens, your company is researching the use of essential oils as environmentally friendly alternatives to chemical pesticides. That is why your company "needs 500g Basil Oil (preferrably from Morocco or Turkey), 100g Calamus Oil (because 'our' research shows it to be highest in the licicide beta-asarone), and 3Kg Sassafras Oil (country of origin unimportant, but Vietnam and China are acceptable)."

Whoa! Was that you that out-of-the-blue started talking like a badass, edjamacated scientist that is about to get some serious stuff sold to her? Yes you! You're on the path to true enlightenment, Grasshopper.

The following companies are mostly mom and pop hippie stores. All of their catalogs are excelent in that they give extremely specific information about the oils they sell. This includes country of origin, plant parts used and, often, the method of extraction. For reasons known only to me, I am going to add the word 'bee' in the comments part if the company sells sassafras oil. Why sassafras oil? No particular reason. But it is a good indication of how comprehensive a company's oil selection is. f they sell sassy, then they sell it all.

## **Aqua Oleum**

Unit 3, Lower Wharf, Wallbridge Stroud, Glos GL5 3JA

U.K.

TEL: (01453) 753 555 FAX: (01453) 752 179 OR 250 "H" Street

> P.O. Box 8110-2800 Blaine, WA 98231-8110 TEL: 604-732-7531

FAX: 604-732-7541

TOLL FREE: 1-800-932-7531

■ Comments: Bee. This is the company owned by Julia Lawless, the author of *The Illustrated Encyclopedia of Essential Oils*. Needless to say, their catalog is the most informative in the business. But they only sell small display size amounts. I never asked if they had larger quantities. Probably do.

#### **Aroma Land**

1326 Rufina Circle Santa Fe, NM 87505-2927

TEL: 505-438-0402 FAX: 505-439-7223

TOLL FREE: 1-800-933-5267
■ Comments: Big selection. Bulk

sizes available.

# Aromatherapy International

3310 River Pines Ann Arbor, MI 48103 TEL: 313-741-1617 FAX: 313-741-7109

TOLL FREE: 1-800-722-4377
■ Comments: Bee. Including bitter bee oil. 100-1000ml sizes available.

Great selection.

#### Aroma Vera

5901 Rodeo Road

Los Angeles, CA 90016-4312

TEL: 310-280-0407 FAX: 310-280-0395

TOLL FREE: 1-800-669-9514 URL: www.aromavera.com

■ Comments: Pretty good selection. So-so prices. Nothing to jump up and down about.

#### Arome

P.O. Box 940 Beacon, NY 12508 TEL: (914) 838-4340

■ Comments: Big prices, small sizes.

Just what I always wanted!

## **Bassett Aromatherapy**

203 Bellevue WAY NE, Suite 434 Bellevue, WA 98004-5721

TEL: 425-451-0845

FAX: 425-451-1615

TOLL FREE: 1-800-738-8678

Comments: Bulk sizes but the prices are horrible. Very sparse selection of allylbenzene containing oils.

#### **Essential Aromatics**

205 North Signal Street

Ojai, CA 93023

TEL: 805-640-1300 FAX: 805-640-1413

TOLL FREE: 1-800-211-1313

■ Comments: Informative catalog but

bad selection.

# Creative Fragrances Manufacturing

10890 Alder Circle Dallas, TX 75238 TEL: 214-341-3666 FAX: 214-341-1423

■ Comments: This company is borderline between retail and industrial. But they are so easy to order from and have such a homey feel that I decided to include them in this aromatherapy list. This company has everything: Bee, Ocotea, bitter almond, brown camphor (sold as camphor 1.070), whole camphor and every other oil. Rock-bottom prices and sizes from 1lb can to 440-lb. drums. Will source anything you wish. This place is in a dead tie with Liberty Natural Products as "bee headquarters!"

#### **Elemi Oils and Herbs**

115 Davis Ave. SW Leesburg, VA 20175 TEL: 703-719-6863

## **Essentially Oils**

8-10 Mount Farm, Churchill, Chipping

Norton

Oxfordshire OX7 6NP United Kingdom

TEL: (01608) 659 544 FAX: (01608) 659 566 URL: xxx.essentiallyoils.com

■ Comments: Bee. Bulk sizes and pretty good prices. Monster selection. Even has dill seed fom India. Hey! Who are they gonna report you to? The English authorities? Go ahead.

You don't live there!

# The Essential Oil Company

P.O. Box 206

Lake Oswego, OR 97034 TEL: 503-697-5992 FAX: 503-697-0615

TOLL FREE: 1-800-729-5912 URL: http://essentialoil.com

■ Comments: Brazilian Bee. Great sizes. Great prices. Very extensive. Ask for their wholesale catalogue.

# Gabrieanna's Herbal and Organic Products

Sacramento, CA 95821 TEL: 916-488-5960

■ Comments: Bee and calamus. Small quantities though.

# **The Good Scents Company**

Oak Creek, WI 53154 USA

TEL: 414-764-2659 FAX: 414-764-6035

■ Comments: Bee. Sells everything. Some of the largest sizes and lowest prices available to the public. Great online catalog with easy online ordering. This is a great source.

#### **Grau-Hall Scientific**

6401 Elvas Avenue Sacramento, CA 95819 TEL: 916-455-5258 ■ Comments: Bee. Not really a lab supply store in the usual sense. They sell teaching supplies and sell them only to teachers. As it so happens, they carry a line of essential oils. Calamus is \$20/4oz.

#### **The Grannery**

Sarasota, FL

TEL: 941-924-4754

## Hands-On AromaTherapy

1558 Nantahalla Court Atlanta, GA 30329 TEL: 404-315-7010

TOLL FREE: 1-800-331-6457

■ Comments: So-so selection. Small sizes on their regular selection but are happy to quote for larger sizes and to find any oil they do not have. Very

hippyish owners.

#### The Herb Merchant

70 W. Pomfret Street Carlisle, PA 17013 TEL: 717-249-0970

■ Comments: Bee. Also carries the

essential oil of camphor.

#### Hunter's Hand Made

P.O. Box 127 Gateshead

Tyne & Wear, NE8 3YT

URL: www.users.zetnet.co.uk/hunters/

price2.htm

■ Comments: Bee. Small sizes. Can get bigger sizes if you ask. Export/import no problem.

#### ISHA

32422 Alipaz St.

San Juan Capistrano, CA 92675

TEL: 714-240-1104

■ Comments: Most oils are here.

Can source and sell bulk beyond their normally small signature line of

aromatherapy bottles.

#### **Joint Adventure**

P.O. Box 824 Rogers, AR 72757 TEL: 501-636-0579 FAX: 501-636-3785

TOLL FREE: 1-800-898-PURE
■ Comments: Bee. Up to 100 ml

sizes available.

## Legendary Ethnobotanical Resources

16245 SW. 304th Street Homestead, FL 33033 TEL: 305-242-0877

■ Comments: Bee. They sell bulk, too.

## Les Herbes, Ltd.

9 Gerry Lane

Huntington, NY 11743 TEL: 516-271-4246

URL: www.aromatherapyinst.com
■ Comments: Big selection but that's

about it.

## **Liberty Natural Products**

8120 SE Stark Portland, OR 97215 TEL: 503-256-1227 FAX: 503-256-1182

TOLL FREE: 1-800-289-8427
URL: www.teleport.com/~liberty
■ Comments: Bee. The most comprehensive catalog available to the public. Personal to drum sizes available. Excellent prices. Excellent

source.

# Nature's Gift Custom Aromatherapy

1009 Glastonbury Road Nashville, TN 37217 TEL: 615-367-4411

## **Natures Symphony**

48 NE First Ave., Suite A Boca Raton, FL 33432 TEL: 561-393-0065

FAX: 561-393-0781

■ Comments: Decent little product line including bitter almond oil. Average prices.

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#### **Nefertum Aromatics**

45 Navy St. #A

Venice Beach, CA 90291

TEL: 310-396-8100 FAX: 310-392-8190

TOLL FREE: 1-800-731-4950

■ Comments: This place is not really an essential oil house. They deal almost exclusively in rare and exotic floral absolutes and oils. Many costing thousands of dollars each.

## **Paradise Aromatics**

1750 Kalakaua Avenue, Suite 3801 Honolulu, HI 96826

TEL: 808-941-8582 FAX: 808-947-3338

#### **Prima Fleur**

1525 E. Francisco Blvd., Suite 16

San Rafael, CA 94901 TEL: 415-455-0957 FAX: 415-455-0956

■ Comments: Good prices in decent

sizes of up to 32 ozs...

#### Roma

63 Ashburnham Road Abington, Northampton NN1 4QY United Kingdom

TEL: (01604) 792 140 FAX: (01604) 721 662

■ Comments: Decent selection but specifically says that they can get any oil from any source in any amount.

# Quintessence Aromatics, Inc.

P.O. Box 536 Marsing, ID 83639 FAX: 208-896-4348

TOLL FREE: 1-800-527-6467

■ Comments: Very informative cata-

log with so-so prices.

#### **Quintessential Oils**

847 35th Street

Richmond, CA 94805 TEL: 510-215-2750 FAX: 510-215-0278

TOLL FREE: 1-800-289-8427

■ Comments: Bee. Good quantities.

Good prices.

#### The Samara Co.

300 Queen Anne Ave. N# 378 Seattle. WA 98109

TEL: 206-282-4532

■ Comments: The lady running this store was the nicest, most helpful person I talked to during the course of this book. Will source all the oils. Sells home distillation kits to get one's oil from the herbs. Will be moving soon to another address in Seattle. Will try to keep you posted.

## **Samarkand Trading Company**

1202 5th Ave. N. Seattle, WA 98109

TOLL FREE: 1-800-260-7401

■ Comments: Bee. So-so sizes. So-

so prices.

#### Secoma

4, Rue de Forges 53240 Andouille

France

TEL: 33-2-43066-55-11 FAX: 33-2-43-66-55-15

■ Comments: Bee. Great selection but I never got a price list from them. They are very big on supplying GC analysis chromatograms with their oils. I have noticed that all French companies like to supply lots of technical data.

## **Scents of Wonder**

10326-81 Avenue

Edmonton, Alberta TGE 1X2

TEL: 403-433-7882 FAX: 403-430-9540 Comments: YAWN!!

## Simplers Botanical Company

**Box 39** 

Forestville, CA 95436 TEL: 707-887-2012 FAX: 707-887-7570

TOLL FREE: 1-800-652-7646

■ Comments: So-so.

## Snow Lotus Aromatherapy

875 Alpine Avenue, Suite 5

Boulder, CO 80306 TEL: 303-443-9289 FAX: 303-443-6361

■ Comments: Good prices and bulk sizes. Should be able to get you what

you want.

#### Time Laboratories Inc.

P.O. Box 3243

South Pasadena, CA 91031

TEL: 208-232-5250 FAX: 208-232-6018

TOLL FREE FAX: 1-888-846-3329

## True Essence Aromatherapy

2203 Westmount Road NW

Calgary, AB T2N 3N5 TEL: 403-283-5653

FAX: 403-283-2996

TOLL FREE: 1-800-563-8938

## The White Rose of Provence Store

117 North Robertson Boulevard

Los Angeles, CA 90048 TEL: 310-276-1191 FAX:: 310-276-1156

TOLL FREE: 1-800-677-2368

Comments: Over 180 oils. Devoid

of one.

#### **A Woman of Uncommon Scents**

P.O. Box 103

Roxbury, PA 17251 TEL: 717-530-0609 FAX: 717-263-6347

TOLL FREE: 1-800-377-3685 ■ Comments: Man, I hate the answering machine message of this

chick!

# United States Essential Oils & Aromatic Chemicals Companies

## **Penta Manufacturing**

P.O. Box 1448
Fairfield, NJ 07007-1448
OR 50 Okner Parkway
Livingston, NJ 07039
TEL: 201-740-2300
FAX: 201-740-1839

■ Comments: I had to put this one at the top of an otherwise alphabetic list. This is Penta Manufacturing. The God of precursors. The God or organics. Over 8000 natural and synthetic aromatic compounds. Every possible naturally occurring organic and aromatic compound on earth can be found here at manufacturer's prices.

I used to be scared to even whisper this company's name. But with nothing to lose and a book to write, I became fearless and called them up. The following conversation should be an affirmation to you that nothing is impossible!

[RING!RING!]

Operator: "Penta Manufacturing."

Me: "Sales Please."

Operator: "Your Company?"

Me: "Bumble Bee Botanicals."

Operator: "Your name?"

Me: "Mrs. Whatever."

Operator: "Please hold. . ."

[PAUSE]

Rep: "Sales, may I help you?"

Me: "Yes I need a price quote on two products."

Rep: "Which two?"

**Me**: "The first is Parsley Herb Oil, cat# 16-02000. The second is Hydratropic Aldehyde, cat# 08-51200."

[But of course I have the catalogue before calling! Also, some nice young man mentioned a funny little use for Hydratropic Aldehyde (a.k.a. 2-Phenylpropanal) on some website somewhere so I decided to use it as a test compound for pricing at one of the few places in the world that actually manufactures it: Penta]

Rep: "How much do you need of each?"

Me: "A kilogram of each will do."

**Rep**: "Ok I got Hydratropic aldehyde in liquid measure. A liter of it is \$62. A kilo of Parsley Herb Oil is \$75. I got em both in stock and can send them out to you this afternoon."

Me: "Cool."

Rep: "How do you want to pay for that?"

Me: "Well, we usually do it by credit card or money order. But because the parsley oil content can be very subjective or degrade over time, I want my olfactory expert to give it a quick sniff upon delivery to see if it is proper. So do you think we could do this COD?"

Rep: "Sure, no problem. What's the address?"

[Shit! Penta was about to actually send me something! I was only here to converse and observe, not to buy. I needed to backtrack. Fast!]

Me: "Er. . . uh. . . There was another thing I needed to ask. Do you have a GC chromatograph or an analysis of the lot from which the parsley oil came?"

Rep: "Are you kidding? We have over 8000 products and can't possibly keep testing them all!"

Me: "Well then could you at least tell me the geographical location from which it came. I can then at least guesstimate its chemical makeup."

**Rep**: "You know, the guys that could tell you this have left for the day."

Me: "Yeah it's really important to have the origin of the oil nailed down because the components can vary widely from country to country. And since the Hydratropic Aldehyde is synergistic with parsley [I made this up], it would be very helpful. Do you think I could suspend this order until tomorrow when I can talk to those source guys?"

Rep: "Oh, sure. I understand."

Me: "Hey, thank you very much for taking the time to work through this order with me. I'll talk to ya tomorrow."

#### Abaco Inc.

Blgd. #5

PO Box 599 Avondale Estates, Ga

30002

TEL: 404-378-0218 FAX: 404-378-0477

## Acme Hardesty Co

PO Box 707

626 Benjamin Fox Pavillion, suite 707

Jenkingtomn, PA 19046-0831

TEL: 215-885-3610 FAX: 215-886-2309

## **Advanced Biotech**

85 5th Avenue

Paterson, NJ 07524 TEL: 201-357-0577 FAX: 201-357-0644

#### AFF

1265 Kennestone Circle Marietta, GA 30066

TEL: 770-427-8177 FAX: 770427-0964

#### Alfrebro

1055 Reed Rd.

Monroe, OH 45050 TEL: 513-539-7373

FAX: 513-539-7373

# **Allco Chemical Corporation**

538 Haggard Street, Suite 402

Plano, TX 75074 TEL: 214-516-0702 FAX: 215-516-0624

## Alpine Aromatics International

51 Ethel Road West

Piscataway, NJ 08854-1348

TEL: 908-572-5600 FAX: 908-5720944

#### **American Aromatics**

1295 Northern Blvd.

Manhasset, Long Island, NY 11030

TEL: 516-365-8844 FAX: 516-365-8472

#### Aromachem

599 Johnson Ave. Brooklyn, NY 11237 TEL: 718-497-4664 FAX: 718-821-2193

#### **Aromatics Inc.**

PO Box 13093 Salem, OR 97309 TEL: 503-363-9494 FAX: 503-363-3394

## Arylessence Inc.

1091 Lake Drive

Marietta, GA 06810-4192

TEL: 770-924-3775 FAX: 770-928-5678

#### **Astral Extracts Ltd.**

160 Eileen Way Syosset, NY 11791 TEL: 516-496-2505 FAX: 516-496-4248

■ Comments: A full lineup essential oils with some aroma chemicals. Very

nice lady I talked to.

## Austin Nichols & Company Inc.

156 East 46th Street New York, NY 10017 TEL: 212-455-9416

FAX: 212-455-9431

#### Beacon Ltd.

70 Floral Avenue

Murray Hill, NJ 07974-1511

TEL: 908-464-5800 FAX: 908-464-0002

#### Bedoukian Research Inc.

21 Finance Dr.
Danbru, CT 06810
TEL: 203-830-4000
FAX: 203-830-4010

TOLL FREE: 1-800-678-7588 URL: www.bedoukian.com

■ Comments: Just aromatic chemicals. No essential oils and no phenyl compounds. But is easy to order from.

Nice mouse pad they sent me.

## Bell Flavors & Fragrances Inc.

500 Academy Drive Northbrook, IL 60062 TEL: 847-291-8300 FAX: 847-291-1217

■ Comments: Massive archives of flavoring and fragrance compounds. Lots of weird stuff. Fake chicken flavors. Imitation octopus flavor. Has a line of essential oils but they didn't send me a copy of it. I suspect it would be very large. I do know they have a ton of benzaldehyde. Have outlets in Europe and Asia.

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# Berje Inc.

5 Lawrence Street Bloomfield, NJ 07003 TEL: 201-748-8980 FAX: 201-680-9618

■ Comments: Sell all essential oils.

#### Bio-Botanica Inc.

75 Commerce Drive Hauppauge, NY 11788 TEL: 516-231-5522 FAX: 516-231-7332

# Blue Pacific Flavors and Fragrances Inc.

15837 Business Center Drive Irwindale. CA 91706

TEL: 818-856-1990 FAX: 818-856-0700

#### Boon Inc.

101 Gibralter Drive, Suite 2B Morris Plains, NJ 07950

TEL: 973-539-7600 FAX: 973-326-9492

■ Comments: Vanilla and natural vanillin only. About \$30/lb. I was quoted. A lot lower than I thought! Also sell fatty acid oils like coconut and palm for all you do-it-yourself soap makers.

#### **Botanicals International**

2550 El Presidio Street Long Beach, CA TEL: 310-637-9566

FAX: 310-637-3644

# Bush Boake Allen Inc. (BBA)

7 Mercedes Drive Montvale, NJ 07645 TEL: 201-391-9870 FAX: 201-391-0860

ESSENTIAL OILS DIVISION: 7500 St. Patrick Street

Canada

TEL: 514-366-1330 FAX: 514-366-7291

LaSalle, PQ H8N 2H2

■ Comments: Big multinational firm with offices and/or outlets in most countries. They've got the goods.

# Byron Chemical Company Inc.

40-11 23rd Street Long Island, NY 11101 TEL: 718-786-8441

FAX: 718-392-3437

#### Cal Compack Foods

4906 West First Street Santa Ana, CA 92703-3110

TEL: 714-775-7757 FAX: 714-531-4848

# **Calgene Chemical Corporation**

7274 North Central Park Avenue

Skokie, IL 60076 TEL: 847-675-3950 FAX: 847-432-7187

## John H. Calo Co., Inc.

P.O. Box 647

1600 Stewart Avenue Westbury, NY 11590 TEL: 516-832-7750 FAX: 516-832-7758

#### Centerchem

225 High Ridge Road Stamford, CT 06905 TEL: 203-975-9800 FAX: 203-975-8777

# Centflor Manufacturing Company Inc.

545 West 45th Street New York, NY 10036 TEL: 212-246-8307 FAX: 212-262-9717

#### Cerestar USA, Inc.

1100 Indianapolis Boulevard

Hammond, IN 46320 FAX: 219-473-6601

TOLL FREE: 1-800-348-9896

## L A Champon & Co., Inc.

100 Metro Park South Laurence Harbor, NJ TEL: 908-566-7000 FAX: 908-566-8656

■ Comments: Vanillin and other stuff.

# **Chart Corporation**

787 East 27th Street Paterson, NJ 07504 TEL: 973-345-5554 FAX: 973-354-2139 ■ Comments: Don't let the intimidating word "Corporation" fool ya. This is a friendly, homey company with a very extensive product line. Many rare oils and extracts including snakeroot. Lots of plant parts including barks, leaves and powders.

#### Chemessence Inc.

Unit 15 180 Sunny Valley Road New Milford, CT 06776 TEL: 860-355-4108

FAX: 860-355-4109

# Ciatti Co., Inc.

42 Miller Avenue Mill Valley, CA 94941 TEL: 415-388-7088 FAX: 415-388-0528

#### Citrus & Allied Essences Ltd.

Suite 3E11

3000 Marcus Avenue Lake Success, NY 11042

TEL: 718-343-0030 FAX: 516-354-1262

■ Comments: Full line of essential oils including Indian Dill Seed (A. Sowa). Branches throughout the world.

#### Classic Flavors & Fragrances

Suite 400

125 East 23rd Street New York, NY 10010 TEL: 212-777-0004 FAX: 212-353-0404

■ Comments: Brokers for all essen-

tial oils.

#### Clermont Inc.

P.O. Box 604 Hillsboro. OR 97123 TEL: 503-648-8544 FAX: 503-648-1224

## Commodity Services International Inc.

P.O. Box 1876

129 North West Street Easton, MD 21601

TEL: 410-820-8880 FAX: 410-820-8890

## **David Cookson & Company**

170 Kinnelon Road Kinnelon, NJ 07405 TEL: 201-283-1500 FAX: 201-283-1860

#### **Compton & Knowles**

1595 MacArthur Boulevard Ingredient Technology Corp.

Mahwah, NJ 07430 TEL: 201-818-1200 FAX: 201-818-2244

## **CTC Organics**

P.O. Box 6933 Atlanta, GA 30315 TEL: 404-524-6744 FAX: 404-577-1651

#### **Dammann & Company**

20 Potash Road Oakland, NJ 07436 TEL: 201-337-3707 FAX: 201-337-0479

## **Elan Chemical Company**

268 Doremus Avenue Newark, NJ 07105 TEL: 201-344-8014 FAX: 201-344-5880

■ Comments: Essential oils, baby!

#### Elias Fragrances

999 East 46th Street Brooklyn, NY 11203 TEL: 718-693-6400 FAX: 718-856-8061

#### **Euco Aromatics**

607 Harmon Cove Towers Secaucus, NJ 07094 TEL: 201-348-1183

FAX: 201-864-4245

## Fairfield Technologies Inc.

93 Arndt Ct.

Fairfield, OH 45014 TEL: 513-939-1701 FAX: 513-939-1703

# Fairmount Chemical Company Inc.

117 Blanchard Street Newark, NJ 07105 TEL: 201-344-5790

#### F&C Wild Flavors Inc.

890 Redna Terrace Cincinnati, OH 45215 TEL: 513-771-5904 FAX: 513-771-6910

#### **Flavormatic Industries**

260 All Angel Hill Road Wappingers Falls, NY TEL: 914-297-9100 FAX: 914-297-2881

#### Fleurchem Inc.

33 Sprague Avenue Middletown, NY 10940 TEL: 914-341-2100

FAX: 914-341-2121

#### Florachem Corporation

63 Main Street, Suite 202 Flemington, NJ 08822 TEL: 908-788-8844 FAX: 908-788-9766

TOLL FREE: 1-800-788-9477

■ Comments: Broker and distributor for other companies such as BBA and Bordas. Not an extremely promising esential oil lineup. But their access to Bordas pure chemicals includes a lot of pure allylbenzenes such as anethole and eugenol.

## Florida Chemical Specialties Co.

P.O. Box 13122 University Station Gainsville, FL 32604 TEL: 352-472-3611 FAX: 353-331-6098

#### Florida Flavors

4330 Drane Field Road Lakeland, FL 33811 TEL: 941-646-0165 FAX: 941-646-0991

■ Comments: "Flavor" companies are less likely to have the lethal essential oils than are the fragrance companies.

#### Florexco Inc.

5610 Wisconsin Avenue #1006 Chevy Chase, MD 20815

TEL: 301-652-8032 FAX: 301-652-8032

# Foote & Jenks Corporation Inc.

1420 Crestmont Avenue Camden, NJ 08103 TEL: 609-966-0700 FAX: 609-966-6137

■ Comments: Most essential oils. Didn't ask about sassy. Too scared.

Sorry.

# Fragrance Resources

275 Clark Street Keyport, NJ 07735 TEL: 908-264-6767 FAX: 908-264-2933

■ Comments: Has outlets in France

and Switzerland.

## **Freedom Chemical Company**

1735 Market Street, Suite 3500 Philadelphia, PA 19103

TEL: 215-979-3100 FAX: 215-979-3733

■ Comments: "Freedom?" "City of Brotherly Love?" You think this company is run by hippies or is people friendly? Probably not.

## Frencharoma Imports Inc.

1558 127th Street

College Point, NY 11356

TEL: 718-359-7400 FAX: 718-359-3344

■ Comments: Seems to be a broker house operated by two people, one of whom is a slow talking lady with an accent that doesn't seem to have a grasp of things. Will find any essential oil for ya.

# Frutarome Meer Corporation

9500 Railroad Avenue North Bergen, NJ 07047

TEL: 201-861-9500 or 201-861-7600 FAX: 201-861-9267 or 201-861-5511

■ Comments: Offices throughout Europe. Great essential oil selection including celery leaf. But no Sass. Wide variety of botanicals including barks (sassafras bark included), whole spices, leaves, roots (including snakeroot), etc. and some pure aroma chemicals.

#### F&S International

605 Third Avenue New York, NY 10158 TEL: 212-490-1356 FAX: 212-557-8457

■ Comments: mporters of Chinese chemicals. No esssential oils. Caffeine, boron and chrome salts (chro-

mic acid).

# **Hagelin & Company**

200 Meister Avenue Branchburg, NJ 08876 TEL: 908-707-4400

FAX: 908-707-4400

■ Comments: Will source you any-

thing.

## **Hardwicke Chemical Company**

RFD 2, Box 50-A Elgin, SC 29045 TEL: 803-438-3471

# **Hartog Aromatics**

529 5th Avenue

New York, NY 10017 TEL: 212-687-2000 FAX: 212-687-2659

■ Comments: No camphor or sassy but will source most anything.

## **D W Hutchinson & Company**

700 South Columbus Avenue

Mt. Vernon, NY 10550 TEL: 914-664-7272

■ Comments: Essential Oils? Yes!

## Intarome Fragrances & Flavors

370 Chestnut Street Norwood, NJ 07648 TEL: 210-767-8700 FAX: 201-767-8757

■ Comments: All essential oils sold here. They sell the different camphor oils. Have large min. order requirements. Great prices, though!

## International Flavors & Fragrances (IFF)

521 W. 57th Street New York, NY 10019 TEL: 212-765-5500

FRAGRANCE CHEM DIVISION:

TEL: 732-335-2213 FAX: 212-708-7132

■ Comments: One of the biggest, if not the biggest, companies of its kind. No essential oils, but all of the components in essential oils and others like them are here. But IFF is such an industry leader that they got a little smug about their products. They decided to call their chemicals not by their IUPAC name but by snazy IFF in-house names. Eugenol is still called eugenol, but most other chemicals are called something like Smellex-2000. So when you order IFF's catalogue you have to ask for the compendium translation text to know what the hell the catalogue is talking about. Other than that, IFF's supply and prices are stellar. And they have offices in most evry country on earth.

## **Jonas Chemical Corporation**

1682 59th Street Brooklyn, NY 11204 TEL: 718-236-1666 FAX: 718-236-2248

■ Comments: All the goodies people want including ocotea cymbarum.

#### Kalama Chemical Inc.

1110 Bank of California Center

Seattle, WA 98164-1061 TEL: 206-682-7890

FAX: 206-682-1907

#### Kalsec Inc.

P.O. Box 50511

Kalamazoo, MI 49005-0511

TEL: 616-349-9711 FAX: 616-382-3060

#### Kato Worldwide Ltd.

One Bradford Road

Mount Vernon, NY 10553

TEL: 914-664-6200 FAX: 914-664-0413

■ Comments: Lots of essential oils.

Has an outlet in France.

# Kelco Division of Merck & Company

8355 Aero Drive San Diego, CA 92123

TEL: 619-569-4900 FAX: 619-569-3436

# **Kendal Foods Corporation**

P.O. Box 157

Goulds, FL 33170 TEL: 305-258-1628 FAX: 305-258-2445

#### **KIC Chemicals**

P.O. Box 437 451 Main Street Armonk, NY 10504 TEL: 914-273-6555

FAX: 914-273-6760

#### Leman Inc.

P.O. Box 100

Bremen, IN 46506-0100 TEL: 219-546-2371

FAX: 219-546-5762

#### Libenn Aroma Inc.

Suite 429

800 E. Northwest Hwy. Palatine, IL 60067 TEL: 847-202-4584

FAX: 847-202-4585

■ Comments: Has contacts, offices and facilities in all the right Asian

countries.

## **MAFCO Worldwide Corporation**

Third Street & Jefferson Camden, NJ 08104 TEL: 609-964-8840 FAX: 609-964-6029

■ Comments: Calamus and other

naughty oils.

#### **Madis Botanicals**

P.O. Box 2247 375 Huyler Street

South Hackensack, NJ 07606

TEL: 201-440-5000 FAX: 201-342-800

#### J. Manheimer Inc.

47-22 Pearson Place

Long Island City, NY 11101-4481

TEL: 718-392-7800 FAX: 718-392-7985

■ Comments: Full line essential oils.

# **McCormick Distilling Company**

One McCormick Lane Weston, MO 64098

TOLL FREE: 1-800-825-0377

FAX: 816-640-2402

■ Comments: I never contacted this maker of America's grocery store spices to see how extensive their product line goes. You can if you wish.

## Medallion International Inc.

101 Riverdale Road Riverdale, NJ 07457 TEL: 201-616-3401 FAX: 201-616-3405

## **Mercantum Corporation**

225 Broadway New York, NY 10007 TEL: 212-233-0412 FAX: 212-233-0506

## David Michael & Company Inc.

10801 Decatur Road Philadelphia, PA 19154 TEL: 215-632-3100 FAX: 215-637-3920

## **Mooney International**

39 Lackawanna Plaza, Suite 1

Bloomfield, NJ 07003 TEL: 201-748-4966 FAX: 201-748-4005

## **Moore Ingredients Ltd**

4729 Devitt Drive Cincinnati, OH 45246 TEL: 513-881-7144 FAX: 513-881-7145 URL: http://moorelab.com

#### Morflex Inc.

2110 High Point Road Greensboro, NC 27403 TEL: 910-292-1781 FAX: 910-854-4085

■ Comments: Only aromatic chemi-

cals.

## Shaw Mudge & Co.

P.O. Box 2279 Shelton, CT 06484-1279

TEL: 203-925-500 FAX: 203-925-5098

■ Comments: Brazilian aromatics.

# Napp Chemicals Inc.

P.O. Box 893 299 Market Street Saddlebrook, NJ 07663 TEL: 201-843-4664 FAX: 201-843-4737

## NewChem Inc.

10 Parsonage Oak Ct. Parkton, MD 21120-0607 TEL: 410-357-4271 FAX: 410-357-4969

#### **Nickstadt-Moeller**

1169 Edgewater Avenue Ridgefield, NJ 07657 TEL: 201-943-9300 FAX: 201-943-9369

■ Comments: The aroma chemical

arm of the Kato group.

#### Noville Inc.

3 Empire Blvd.

South Hackensack, NJ 07606

TEL: 908-754-2222 FAX: 201-814-1914

■ Comments: Full line of essential oils.

## O'Laughlin Corporation

120 Case Drive

South Plainfield, NJ 07080

TEL: 908-769-9191 FAX: 908-769-9699 IN HOLLAND: AAKO BV

P.O. Box 205 Arnhemseweg 87

3830 AE Leusden, Holland TEL: (31) 33-494-8494 FAX: (31) 33-494-8044 IN HONG KONG:

O'Laughlin Industries Co. Ltd.

20-24 Lockhart Road

15th floor, Golden Star Bldg. Wanchai, Hong Kong

TEL: (852) 2527-1031 FAX: (852) 2529-0231

■ Comments: Principal dealer in sassafras oil. Other Asian oils as well.

# **Original Swiss Aromatics**

P.O. Box 6842

San Rafael, CA 94903 TEL: 415-459-3998 FAX: 415-479-0614

■ Comments: What the hell grows in

Switzerland? Reeecolaaaah!

Reeeeeecolaaaah!

# **Parman-Kendal Corporation**

P.O. Box 157

Goulds, FL 33170-1628 TEL: 305-258-2445

#### Perlarom Inc.

9133 Red Branch Road Columbia, MD 21045 TEL: 410-997-5114 FAX: 410-964-9374

# **Philip Brothers Chemicals**

One Parker Plaza Fot Lee, NJ 07024 TEL: 201-944-6020 FAX: 201-944-6245

## Phoenix Aromas and Essential Oils

Suite 4016

866 United Nations Plaza New York, NY 10017-1808

TEL: 212-750-5786 FAX: 212-826-0887

## **PMC Specialties Group**

20525 Center Ridge Road Rock River, OH 44117 TEL: 216-356-7545 FAX: 216-356-6281

#### Polarome Manufacturing Co.

200 Theodore Conrad Drive Jersey City, NJ 07305 TEL: 201-309-4500 FAX: 201-433-0638

■ Comments: Second only to Penta in its comprehensiveness. This place

has it all!

#### **Pressure Chemical**

3419 Smallman Street Pittsburg, PA 15201 TEL: 412-682-5882 FAX: 412-682-5864

## **Quantum Chemical Company**

11500 Northlake Drive Cincinnati, OH 45249-1694

TEL: 513-530-6500 FAX: 513-530-6560

#### **RCB International Ltd.**

39878 Turnidge Road NE Albany, OR 97321 TEL: 541-967-3814

FAX: 541-928-4633

## **Red Star Bioproducts**

433 E. Michigan Street Milwaukee, WI 53202

TOLL FREE: 1-800-528-3388

FAX: 414-347-3912

## **Riba Corporation**

3210 Parkway Drive Decatur, IL 62526 TEL: 217-429-7422 FAX: 217-429-2848

#### **RKU** Associates Inc.

800 Inman Avenue Colonia, NJ 07067 TEL: 908-396-1880 FAX: 908-574-9085

#### **Roche Chemical**

340 Kingsland Street, Bldg. 706

Nutley, NJ 07110 TEL: 201-909-8332 FAX: 201-909-5592

## Schweizerhall Inc.

10 Corporate Place South Piscataway, NJ 08854 TEL: 908-981-8200 FAX:908-981-8282

# **Spectrum Quality Products**

755 Jersey Avenue

New Brunswick, NJ 08901

TOLL FREE: 1-800-772-8786 FAX: 1-800-525-2299

OR 14422 S. San Pedro St.

Gardena, CA 90248 TEL: 310-516-8000 FAX: 310-516-7512

■ Comments: Definite supplier of

sassy and other good oils.

# Strong Chemical Inc.

2 Weavers Lane

Whitehouse Station, NJ 08889

TEL: 908-534-1727 FAX: 908-534-0875

#### Swisher International

459 E. 16th Street Jacksonville, FL 32206

TEL: 904-353-4311 FAX: 904-353-9175

## Talin USA

265 Alice Street Wheeling, IL 60090 TEL: 847-537-7050

FAX: 847-537-2077

#### Texarome Inc.

P.O. Box 157

1.5Mile Hwy. 337 East Leakey, TX 78873

TEL: 210-232-6079 FAX: 210-232-5716

## A M Todd Company

P.O. Box 50711

Kalamazoo, MI 49005

TEL: 616-343-2603 FAX: 616-343-4913

■ Comments: Broker for many oils.

Will source for you.

#### TR-Metro Chemicals Inc.

CN 911, 36 Mileed way Avenel, NJ 07001

TEL: 908-382-2100 FAX: 908-499-7799

## **George Uhe Company**

P.O. Box 970

12 Route 17 North

Paramus, NJ 07653-0970

TEL: 201-843-4000 FAX: 201-843-7517

■ Comments: Good essential oil lineup including Indian and regular

dill oils and calamus.

## **Ungerer & Company**

P.O. Box U

4 Bridgewater Lane Lincoln Park, NJ 07035

TEL: 201-628-0600 FAX: 201-628-0251

■ Comments: Branches in Mexico, France, Singapore and the U.K. Impressive lineup of oils including bitter

almond, clove, dill, mace etc.

## **Ventura Coastal Corporation**

P.O. Box 69

Ventura, CA 93001 TEL: 805-653-7000 FAX: 805-653-7777

## Vigon International Inc.

Airport Road RR2 Box 2093

East Stroudsburg, PA 18301

TEL: 717-476-6300 FAX: 717-476-1110

# **Virginia Dare Extract Company** Inc.

882 Third Avenue Brooklyn, NY 11232 TEL: 718-788-1776

FAX: 718-768-3978

## **Velsicol Chemical Corporation**

Suite 600

10400 W. Higgins Rosemont, IL 60018 TEL: 847-298-9000

FAX: 847-298-9015

# The John D Walsh Company

235 Margaret King Avenue Ringwood, NJ 07456

TEL: 201-962-1400 FAX: 201-962-1557

■ Comments: A distributor and middleman company that represents many of the US and foreign manufacturers listed in this book. This place has access to and sells everything. A definite contender.

# **Wessel Fragrances**

Boumar Place Elmwood Park, NJ 07407 TEL: 201-796-4541

FAX: 201-796-2890

# **D.D. Williamson & Company**

P.O. Box 6001

Louisville, KY 40206-6001

TEL: 502-895-2438 FAX: 502-584-4489

#### Wytenhove Inc.

9th Floor

200 Hudson Street New York, NY 10013

TEL: 212-966-4515 FAX: 212-925-8363

# **Yamasa Corporation**

Suite 202

1995 w. 190th Street Torrance, CA 90504 TEL: 310-523-4885

# Zenith Supplies Inc.

6300 Roosevelt Way NE Seattle, WA 98944

TEL: 509-837-3323

TOLL FREE: 1-800-735-7217

# Zink & Triest Company

111 Commerce Drive

Montgomeryville, PA 18936

TEL: 215-362-110 FAX: 215-368-5916

# International Essential Oils & Aromatic Chemicals Companies

A viable, legal and perefetly acceptable avenue to get esential oils and aromatic chemicals. Buying from a country other than your own is easy. Most purchases are just as easy and uncomplicated as any domestic retail purchase you would make. You send the company money and they send you you your stuff. Simple economics, folks. The biggest plus being that your purchase is totally immune to any origin-of-sale scrutiny or monitoring. Do you honestly think that Wang's Oil Shack in South Korea has to send its monthly purchase lists to US DEA headquarters?

For companies that have branches in the US I list those addresses. But if discretion is your game then you may choose to contact a company that has no US contacts. If a company has a US branch then they will most likely refer all sales to that location.

I tried my best to get the specific goods on as many foreign companies as I could. The European companies were easiest. But I will admit right now that I did not personally contact any of the Asian companies. During their normal business hours I was sleeping like a baby. Sorry. But I have enough info about the companies as-is to give you a decent enough idea of what to expect. You may also wish to look at the Import/Export chapter to get a little more info about the process. Although I am far from an expert on the subject. But, in truth, dealing with any of these companies is just like dealing with one in your own country. All of the companies speak English by the way. And what, pray tell, are these international companies? Funny you should ask...

# Aceites Esenciales y Derivados SA

P.O. Box 2

Acedesa 30120

El Palmar, Murcia

Spain

TEL: (34) 68-880-839 FAX: (34) 68-880-880

#### Adrian SA

**BP 10** 

15 Rue Cassis

13446 Marseille catini Cedex 06

FRANCE

TEL: (33) 4-9117-4242 FAX: (33) 4-9178-4022

OR JPM Imports Inc. 10-43 47th Avenue

Long Island City, NY 11101

TEL: 718-784-6430 FAX: 718-784-6435

■ Comments: Star anise, clove stem oil, clove leaf oil, elemi, nutmeg etc. Don't know if they have sassy. You'll have to ask. Branches in Germany

and U.K.

# A & E Connock (Perfumery and Cosmetics) Ltd

Fordingbridge Alderholt Mill House Hampshire, SP6 1PU **ENGLAND** 

TEL: (44) 1425-653-367 FAX: (44) 1425-656-041

# Aggarwal Exports

B-8 Roshnan Bagh Industrial Estate Rampur 244 901

INDIA

TEL: (91) 595-4884 FAX: (91) 11-94111

#### Agipal

12, rue de Puebla

B.P. 50-78600 Maisons-Lafitte, Cedex

FRANCE

TEL: (33) 1-3962-3277 FAX: (33) 1-3962-0486

#### Agnel

F-84400 APT

FRANCE

TEL: (33) 4-9074-1443 FAX: (33) 4-9074-5218

■ Comments: Full lineup of essential

oils.

# Agripotential S R L

P.O. Box 3297

Eligio Ayala 1870 Asuncion

PARAGUAY

TEL: (595) 21-211-361 FAX: (595) 21-212-586

# Agrumaria Corleone S p A

Via Salvatore Corleone 12-90124 Palermo

ITALY

TEL: (39) 91-6213933 FAX: (39) 91-476441

# Ajinomoto Inc.

Chuo-ku

5-8 Kuibashi 1-chome

Tokyo, 104

JAPAN

OR 500 Frank W. Burr Blvd.

Glenpointe Centre West Teaneck, NJ 07666-6894

TEL: 201-488-1212

#### A.L.P.

BP 6-37350 Le Grand Pressingny

FRANCE

TEL: (33) 2-4794-9797

# FAX: (33) 2-4794-9803

#### A M C Chemicals

10 Charterhouse Square London EC1M 6EH

**ENGLAND** 

TEL: (44) 171-6264521 FAX: (44) 171-4902726

#### AMCO Internacional SA de CV

Colonia de Valle Moras 829

Mexico DF, 03220

**MEXICO** 

TEL: (52) 5-524-9797 FAX: (52) 5-534-7149

# APAESA Essential Oils Producers

Zona 10, OF. 801 6a Calle 1-36 Guatemala GUATEMALA

TEL: (502) 2-313855 FAX: (502) 2-341290

# Argeville SA

BP 102

Domaine d'Argeville Mougins, Cedex 06250

FRANCE

TEL: (33) 9292-4343 FAX: (33) 9292-4344 OR **JPM Imports Inc.** 

10-43 47th Avenue

Long Island City, NY 11101

TEL: 718-784-6430 FAX: 718-784-6435

■ Comments: Basil, Clove, elemi,

tarragon etc.

#### **Aroma Industries**

III Dsidc

Okhla Ind. Area, Ph II New Delhi 110 020

INDIA

TEL: (91) 11-6841353 FAX: (91) 11-6840763

#### **Aromate Private Ltd**

43 Carpenter Street 4th Floor, Greatwood Building Singapore 0105

SINGAPORE TEL: 65-5366322 FAX: 65-5368322

### **Aromsa Ltd STI**

Organize Sanay Bolgesi PK:18 41400

Gebze

Kocaeli-Turkiye

TURKEY

TEL: (90) 262-751-1384 FAX: (90) 262-751-1390

#### **Art et Parfum**

**BP 08** 

06530 Cabris

FRANCE

TEL: (33) 4-9360-5252 FAX: (33) 4-9360-5782

#### **Astier Demarest S A**

60 rue de la Paoute

F-06338 Grasse

FRANCE

TEL: (33) 9340-5656 FAX: (33) 9730-2690

#### **Atlas Trades & Exports**

P.O. Box 376

149 St. Joseph Street

Colombo 14 SRI LANKA

TEL: (94) 1-323-853 FAX: (91) 1-332-867

#### **Augustus Oils Limited**

64 Woolmer Trading Estate

Bordon

Hants GU35 9QF

**ENGLAND** 

TEL: (44) 1420-488555 FAX: (44) 1420-476777

#### **Aust & Hachmann Ltd**

4920 De Maisonneuve Blvd., W#11

Montreal, Quebec H3Z1N1

CANADA

TEL: 514-482-4615 FAX: 514-483-6183

### **Australian Master Distilling Co**

Level 9/26 Wharf Street Brisbane, Queensland 4000 AUSTRALIA

TEL: (61) 7-3221-0971 FAX: (61) 7-3221-0975

#### AVM Essential Oils Aromatics S R L

Via Belgirate 18 Milano, 20125

ITALY

TEL: (39) 2-27-300499 FAX: (39) 2-27-301905

# **Azure Fragrances**

PAC de l'Argile 06370 Mouans-Sartoux FRANCE

TEL: (33) 4-9375-6868 FAX: (33) 4-9292-2128

#### BASF AG

MER/RR

D-67056 Ludwigshafen

**GERMANY** 

TEL: (49) 621--60-93366 FAX: (49) 621-60-48444

OR 3000 Continental Drive North Mount Olive, NJ 07828-1234

> TEL: 201-426-5363 FAX: 201-426-5369

■ Comments: Big-ass company.

Mostly aromatic chemicals. Not much you would want, but then again. . .

#### **Beeta Chemicals**

Andheri Kurla Road B/19 Nan-Jyot Industrial Estate Bombay 400 072

INDIA

TEL: (91) 5129019

#### Beihai-Zhuhai

Jiuzhou Avenue, Zhuhai Rm 1-2C, #rd Block Guancun Garden Guangdong CHINA

TEL: (86) 756-3355706 FAX: (86) 756-3355795

■ Comments: Ask them about that sassafras oil they sell.

# **Bhagat Impex Ltd**

1st Floor 164, Sitaram Poddar Marg Mumbai 400 002 INDIA

TEL: (91) 22-208-6587 FAX: (91) 22-205-7089

# Bias Lorente Gonzales, S.L.

Rambla de las Peras, 260 P.O. Box 26

30850 Totana (Murcia)

SPAIN

FAX: (34) 68-422123

URL: www.interbook.net/personal/

blassl

■ Comments: Aromatic herbs and pure essential oils.

# Boehringer Ingelheim Chemicals

P.O. Box 200 D-6507 Ingelheim am Rhein GERMANY

#### **Boelens Aroma Chemical**

Groen van Prinstererlaan 21 1272 GB Huizen NETHERLANDS

TEL: (31) 35-525-3558 FAX: (31) 35-525-3558

# The Bombay Oil Industries Ltd

Bhandup Lal Bahadur Shastri Marg Bombay 400 078 INDIA

TEL: (91) 22-565-0231 FAX: (91) 22-564-6384

# Distilaciones Bordas Chinchurreta SA (just call 'em

Bordas)

Aptdo Correos 11

Carretera de Carmona 30

41008 Sevilla

SPAIN

TEL: (34) 5-441-9000 FAX: (34) 5-441-7152

■ Comments: This place has it all!

#### **Brasway SA**

Sau Paulo 04711-903 Rua Enxonia 423-455 Sau Paulo BRAZIL

TEL: (55) 11-548-5500 FAX: (55) 11-526-3886

### **Britania Natural Products Ltd**

Rougham Industrial Estate Woodlands Business Park, Unit 5 Rougham, Suffolk IP309ND ENGLAND

TEL: (44) 1359-271-461 FAX: (44) 1359-271-670

■ Comments: Bitter almond, A. sowa.

# Bruder Unterweger GesmbH & Co KG

A-9911 Thal-Assling Bahnstation Thal AUSTRIA

TEL: (43) 4855-2010 FAX: (43) 4855-20122

#### **Busby Essential Oils Ltd**

P.O. Box 22 Lothair 2370 SOUTH AFRICA

TEL: (27) 17-8451210 FAX: (27) 17-845-1058

# Camilli, Albert & Laloue (CAL)

27, av. Sainte-Lorette

B.P. 94

F-06130 Grasse Cedex

FRANCE

TEL: (33) 1-9336-0869 FAX: (33) 1-9336-8173 OR 20 Lake Drive

East Windsor, NJ 08520 TEL: 609-448-4191

FAX: 609-448-4802

■ Comments: Elemi, tarragon,basil.

Lots of floral stuff.

# Camphor and Allied Products Ltd.

133 Mahatma Ghandi Road Jehangir Building Bombay 400 001

INDIA

TEL: (91) 22-270833 FAX: (91) 22-2624295

### Capri de Conias

Shrinath Market, Bhagirath Palace

1702/103 1st Floor Delhi 110 006

INDIA TEL: (91) 11-296-7502

FAX: (91) 11-296-6850

■ Comments: Star anise, nutmeg.

Probably a lot more.

#### **Cavallier Freres SA**

**BP 54** 

37, avenue Sidi Brahim 06336 Grasse

FRANCE

TEL: (33) 4-9309-7200 FAX: (33) 4-9309-7209

#### **Charabot SA**

BP 68

10 ave Yves E Baudoin 06130 Grasse Cedex

FRANCE

TEL (33) 4-93-09-33-33 FAX: (33) 4-93-09-33-01 OR 30 Corporate Drive

Orangeburg, NY 10920-2622

TEL: 914-398-1200 FAX: 914-398-1440 ■ Comments: Every oil except "one." Also a nice selection of isolated pure components such as eugenol, methyl chavicol, methyl eugenol, methylisoeugenol, and isoeugenol to name a few. Has branches in most countries. Looks good.

#### **Pierre Chauvet SA**

Usines de Seillans 83440 Fayence FRANCE

TEL: (33) 4-9439-0000 FAX: (33) 4-9439-0009 OR 3 Reuten Drive Closter, NJ 07624

TEL: 201-784-9300 FAX: 201-784-0604

■ Comments: Monster oil list. Possibly the most comprehensive I have ever seen except that they are short of calamus, bitter almond and sass. Even has 'Russian' tarragon! Has a very small company feel to it.

# China National Cereals, Oils and Foodstuffs Import & Export Corp.

11 Hankou Road Shanghai CHINA

TEL: (86) 21-6321-9760 FAX: (86) 21-6324-8856

# Chemical Refining Company Pty Ltd

17 Ann Street Williamstown, VIC 3016 AUSTRALIA TEL: (61) 297-1911

#### **Chiquet Aromatics**

P.O. Box 2545 CH-4002 Basel SWITZERLAND

TEL: (41) 61-331-0404 FAX: (41) 61-331-3594

## **CIECH-Polf Group, CEICH SA**

P.O. Box 271

46/50 Powazkowska Str.

00.950 Warszawa

POLAND

TEL: (55) 16-282-8508 FAX: (55) 16-282-1751

#### Clos d'Aguzon SA

26170 Saint-Auban-sur-l'Ouveze Buis-les-Baronnies FRANCE

HANCE

TEL: (33) 7528-6464 FAX: (33) 7528-6032 OR **Bontoux, Inc.** 

800 Inman Ave. Colonia, NJ 07067 TEL: 908-396-1880 FAX: 908-574-9085

■ Comments: Full lineup of oils!

# Coimbatore Flavors & Fragrances Ltd

K. Vadamadurai Post 5/82, Palanigoundenpudur Coimbatore 641 017 INDIA

TEL: (91) 422-84-20-76 FAX: (91) 422-84-28-19

# Compagnie des Tropiques

133, rue Victor Hugo

**BP 16** 

92270 Bois-Colombes

FRANCE

TEL: (33) 1-4649-9191 FAX: (33) 1-4649-9080

# Compagnie Parento Ltd

16 Curity Avenue Toronto, Ontario M4B 1X7 CANADA

TEL: 416-751-5100 FAX: 416-751-5141

# F D Copeland & Sons Ltd

5 Westfield Street Colanol House London, SE18 5TL ENGLAND

TEL: (44) 181-845-8101 FAX: (44) 181-854-1077

#### **Courtaulds Chemicals**

Leek

Macclesfield Road Stratfordshire ST13 8UZ TEL: (44) 1538-399100 FAX: (44) 1538-399025

OR Aceto Corporation
One Hollow Lane

Lake Success, NY 11042 TEL: 516-627-6000 FAX: 516-627-6093

#### **CPL Aromas Pic**

Hatfield Broad Oak Barrington Hall Bishop's Stortford Hertfordshire CM22 7LE ENGLAND

TEL: (44) 1279-718573 FAX: (44) 1279-718527

#### **CPL Aromachem**

Billingham Belasis Avenue Cleveland TS23 1LQ ENGLAND

TEL: (44) 1642-563344 FAX: (44) 1642-566789

# Creations Aromatiques SA

2 rue Thalberg 1201 Geneva 1 SWITZERLAND

TEL: (41) 22-731-1335 FAX: (41) 22-731-7414 OR P.O. Box 1188 400 Sylvan Avenue

Englewood Cliffs, NJ 07632

TEL: 201-818-1200 FAX: 201-818-2244

#### **H E Daniel Ltd**

Royal Turnbridge Wells Longfield Road Kent TN2 3EY ENGLAND

OR 179 Lindsey Avenue Buchanan, NY 10511-1611

TEL: 914-737-2700 FAX: 914-737-9419

■ Comments: Full lineup of oils including Bitter Almond.

# **Danisco Ingredients**

Edwin Rahrs Vej 38 DK-8220 Brabrand DENMARK

TEL: (45) 8943-5000 FAX: (45) 8625-1077

■ Comments: Branches in every corner of the world. I still don't know what it is they sell, though.

# **DGF Universal Fragrances SA**

Carretera Armilla, Km 2,5 P.O. Box 69, 18080 Granada 18100 Armilla SPAIN

TEL: (34) 958-135145 FAX: (34) 958-130414

■ Comments: Both Fennel types

available.

# Dierberger Oleos Essenciais SA

Rua Dr Pascoal Imperatriz 75 04705-070 Sao Paulo

BRAZIL

TEL: (55) 11-543-6811 FAX: (55) 11-240-7052

■ Comments: Oils from here can be purchased thru the Uhe company in the US companies list. Also has offices in Germany and Switzerland.

# **Dimbulah Export Oils Network**

P.O. Box 228 Dimbulah NG 4872 AUSTRALIA

TEL: (61) 70-93-54-51 FAX: (61) 70-93-54-68

#### **Dragoco Gerberding & Co AG**

D-37601

Holzminden/Weser

**GERMANY** 

TEL: (49) 5531-97-0 FAX: (49) 5531-971391 OR 10 Gordon Drive Totowa, NJ 07512

TEL: 201-256-3850 FAX: 201-256-6420

■ Comments: Branches in every

country that counts.

# **Drom Fragrances International**

Oberdiller Str. 18 Postfach 1141

Dr. O. Martens Nachf. KG D-82065 Baierbrunn

GERMANY

TEL: (49) 89-74425-0 FAX: (49) 89-793-4966 OR 5 Jacksonville Road Towaco, NJ 07082 TEL: 201-316-8400

TEL: 201-316-8400 FAX: 201-316-9039

■ Comments: Branches in Australia, U.K., France and Netherlands.

#### **DSM Special Products BV**

P.O. Box 62 6160 MK Geleen NETHERLANDS

TEL: (31) 46-763-029 FAX: (31) 46-330-112 OR 217 Route 46 West

> Saddle Brook, NJ 07663 TEL: 201-845-4404 FAX: 201-845-4406

#### **Efamol Ltd**

Stratford 40 Warton Road London E15 2JU ENGLAND

TEL: (44) 1555-9042

# Enjayes Spices and Chemical Oils Pvt Ltd

Vallicode-Kottayam

Spices Hill

Pathanamthitta, Kerala 689 656

INDIA

Comments: Indian dill seed oil,

jasmine oil etc.

# **Essential Oil Company Ltd**

Tan Mai, Q Hbt 271 B-B1 Hanoi

VIETNAM

TEL: (84) 4-532255 FAX: (84) 4-641209

■ Comments: Lots of Sassafras oil!

# Essential Oils of Tasmania Pty Ltd

Kingston P.O. Box 162 Tasmania 7050 AUSTRALIA

TEL: (61) 362-294-222 FAX: (61) 362-292-957

# Fancy Flavors and Fragrances Corporation

Postcode: 200072 889 Hu Tai Road Shanghai

CHINA TEL: (86) 21-9108-6961 FAX: (86) 21-5672-2302

#### Far Eastern Impex

P.O. Box 12486 Karachi 75400 PAKISTAN

TEL: (92) 21-430127 FAX: (92) 21-437323

#### Firmenich SA

P.O. Box 239 CH-1211 Geneva 8 SWITZERLAND

TEL: (41) 22-780-2211 FAX: (41) 22-343-7322

OR P.O. Box 5880

Princeton, NJ 08543 TEL: 609-452-1000 FAX: 609-921-0719

■ Comments: Branches in most

countries.

#### Fontarome SA

Z.I. du Vert Galant 66-68 Ave. Du Chateau F-95310 St. Ouen L'Aumone

FRANCE

TEL: (33) 1-34-48-57-57 FAX: (33)-1-34-64-94-27 OR 4170 S. Nevada Ave.

St. Francis, WI 53235-4515

TEL: 414-744-3993 FAX: 414-744-7111

### Formosa Perfume Ind e Com Ltda

Av Indianapolis 725 Sao Paulo CEP 04063 BRAZIL

TEL: (55) 11-570-4137 FAX: (55) 11-571-4414

#### **Fuerst Day Lawson Ltd**

30-33 Minories St. Clare House London EC3N 1LN ENGLAND

TEL: (44) 171-488-0777

#### **Galilee Aroma Resources**

P.O. Box 251 South Industrial Zone Kiryat Shimona ISRAEL

TEL: (972) 6-953504 FAX: (972) 6-944980

#### **GFF Exports**

Sion East

157 Nirmala Nivas, 3rd Floor

Bombay 400 022

INDIA

TEL: (91) 22-409-1833 FAX: (91) 22-407-1419

#### Givaudan-Roure SA

5 chemin de la Parfumerie

CH-1214 Vernier

Geneva

**SWITZERLAND** 

TEL: (41) 22-780-911 FAX: (41) 22-780-9595 OR P.O. Box 5034 Clifton, NJ 07015 TEL: 973-365-8000

FAX: 973-365-1015

■ Comments: Branches in most

countries.

# Goldensun Manufacturing Company

70 Princess Street Ranvir Building Bombay 400 002 INDIA

TEL: (91) 22-252-745 FAX: (90) 22-201-8054

#### **Grassroots Natural Products**

P.O. Box 16 Gouda 6821 SOUTH AFRICA

TEL: (27) 236-320506 FAX: (27) 236-320429

#### **Grau Aromatics GmbH & Co KG**

P.O. Box 1368 Bismarckstrasse 4 D-73503 Schwaebisch Gmuend GERMANY

TEL: (49) 7171-91140 FAX: (49) 7171-911-410

■ Comments: Branches in every country. For the US this companies products are distributed thru J.

Manheimer, Inc. whose address is in the United States Companies section.

#### **Haarman & Riemer GmbH**

Postfach 1253 Rumohrtalstrasse 1 D-37601 Holzminden

**GERMANY** 

TEL: (49) 5531-90-0 FAX: (49) 5531-901649 OR **H & R Florasynth** 

> 300 North Street Teterboro, NJ 07608 TEL: 201-288-3200 FAX: 201-467-3514

■ Comments: Branches in most

countries.

# Haiti Fragrance SA

P.O. Box 1243 Port-au-Prince, Haiti

#### Haltermann N V

Ketenislaan 3 Haven 1972 B-9130 Kallo NETHERLANDS TEL: (32) 3-570-

TEL: (32) 3-570-0225 FAX: (32) 3-575-0535

#### M Hamburger & Sons Ltd

Tannery Lane, Send Woking Surrey GU23 7ES ENGLAND

TEL: (44) 1483223501

# T Hasegawa Co Ltd

Nihonbashi, Chou-ku 4-4, 14-Honcho Tokyo 103 JAPAN

OR 14017 East 183rd Street Cerritos, CA 90703

> TEL: 714-522-1900 FAX: 714-522-6800

#### **Hashem Brothers**

47 Giza Street

Giza EGYPT

TEL: (20) 2-469-8124 FAX: (20) 2-469-7027

#### Hasslauer

10 rue de l'Ancienne F-92771 Boulogne

Cedex FRANCE

TEL: (33) 1-4699-1400 FAX: (33) 1-4604-1221

### **Helm AG**

Nordkanalstrasse 28 D-20097 Hamburg GERMANY

OR 1110 Centennial Avenue Piscataway, NJ 08854-4169

> TEL: 908-981-1160 FAX: 908-981-0528

■ Comments: Big multinational company out of Germany. They supply chemicals, fragrance compounds, essential oils and pharmaceuticals. Was recently investigated on "60 Minutes" because of alledged unscrupulous activities such as selling poisonous or useless antibiotics, and brokering bogus Chinese medicines, to Haitian and African relief agencies and orphans. Sounds unscrupulous. Sounds perfect (not the part about poisoning orphans. . . just the general trend of its sales policies).

#### **Hitashi Chemical**

38/1, C.I.T. Scheme No. XLV (11, Ezra Street) Calcutta – 700 001 INDIA

TEL: (91)-33-247-1759 FAX: (91)-33-247-9738 ■ Comments: Good looking little company. No sassafras but a lot of goodies. Calamus, parsley, cubeb, mace, carrot, basil and all those different cultivars of betel leaf oil. A small lineup of pure chems including methylchavicol and phenyl acetic acid.

## **Lionel Hitchen Essential Oils** Ltd

Barton Stacey Gravel Lane Nr Winchester Hampshire SO21 3RQ **ENGLAND** 

TEL: (44) 1962-760-815 FAX: (44) 1962-760-072

**OR Thwaites** 

Route 27, Box 413 The Coburn House Boothbay, MA 04573 TEL: 207-633-7251 FAX: 207-633-7249

#### W.H. Hobbs & Co. Ltd.

166 Tower Bridge Road London SE1 **ENGLAND** 

Comments: Bulk sales of all essential oils.

#### **Huls Aktiengesellschaft**

D-45764 Marl **GERMANY** 

TEL: (49) 2365-494606 FAX: (49) 2365-496185 OR P.O. Box 6821

> Somerset, NJ 08873 TEL: 908-560-6940 FAX: 908-560-6391

■ Comments: Mostly aromatic

chemicals.

# Ikeda Bussan Kaisha Ltd

3-1 Marunouchi, 3-chome New Tokyo Building Chiyoda-ku, Tokyo JAPAN

TEL: (81) 3-3212-8791

#### PT Indesso Aroma

Teromol Pos 3278/Jkt 78, Jl. Tanah Abang II Jacarta 10150 **INDONESIA** 

TEL: (62) 21-386-3974 FAX: (62) 21-385-0538

# **Indian Organic Chemicals**

Hiranadani Gardens 2nd Floor Chemtex House Powai, Bombay 400 076 INDIA

TEL: (91) 22-776-033 FAX: (91) 22-579-3924

#### InPaCo

148 Vassil Levski Inst. For Perfumery, Cosmetics & Essential Oils BG-4003 Plovdiv BULGARIA

TEL: 359-3226-6919 FAX: 359-3255-1122

# **Jagat Aroma Oils Distillery**

Kannauj-209725

INDIA

TEL: (91) 5694-34401 FAX: (91) 5694-34335

Comments: All those badass Indian oils including calamus.

# Jiangsu Native Produce Import & Export

38 Gongyuan Road Nanjing 210001

CHINA

TEL: (86) 25-445-5148 FAX: (86) 25-445-3784

# **Jindal Drugs Ltd**

220 Nariman Point 145 Maker Chambers VI Mumbai 400 021 INDIA

TEL: (91) 22-287-1633 FAX: (91) 22-202-0690

OR Bontoux Inc.

800 Inman Avenue Volonia, NJ 07067 TEL: 908-396-1880 FAX: 908-574-9085

### Jindal Exports Ltd

C-54/2 Wazirpur Industrial Area Delhi 110 052

INDIA

TEL: (91) 11-721-9693 FAX: (91) 11-724-4405

■ Comments: Calamus and friends.

#### **Paul Kaders GmbH**

Eschelsweg 27 D-22767 Hamburg GERMANY

TEL: (49) 40-380-308-0 FAX: (49) 40-380-308-27

#### Kalkinma Kooperatif

Tol Eczanesi 33949 Silifke/ICEL TURKEY

#### **Kao Corporation**

1-3, Bunka 2-chomeSumida-ku, Flavors and FragrancesDept.Tokyo 131

Tokyo 131 JAPAN

TEL: (81) 3-5630-9590 FAX: (81) 3--5630-9350

#### **Kapco Export House**

Ford & MacDonald Compound 14/74, Civil Lines, Flat #4 Kanpur 208001

INDIA

TEL: (91) 5694-34568 FAX: (91) 5694-34724

#### **Kieth Harris & Co Ltd**

P.O Box 147 7 Sefton Road Pennant Hills NSW 2120 AUSTRALIA

TEL: (61) 2-9484-1341 FAX: (61) 2-9481-8145

### Kelkar & Co. Ltd., S H

Lal Bahadur Shastri Marg, Mulund Bombay 400 080

INDIA

TEL: (91) 22-564-2242 FAX: (91) 22-564-7334

# **Keyser & Mackay**

Badener strasse 701 Zurich 8048 SWITZERLAND

TEL: (41) 1-431-6161 FAX: (41) 1-432-8026

# Kialing Company Ltd.

162-37 Hsin Yi Road, Sec. 3 Taipei TAIWAN

# Kind Luck Trading Pte Ltd.

101 Upper Cross Street #10-11 People's Park Center Singapore 058358

TEL: (65) 534-4220 FAX: (65) 534-3076

■ Comments: Sassafras oil and some aromatic chems such as vanillin, anethole and heliotropin.

#### Kistler & Co GmbH

Lindenstrabe 5 D-85254 Sulzemoos/Orthofen GERMANY

TEL: (49) 81-34-7055 FAX: (49) 81-34-7757

# Konsa Konsantre Sanayi AS

Mecidiyekoy Buyukdere Cad. Kugu Ishani 99/2 Istanbul TURKEY

#### **Krems Chemie AG**

Hafenstrasse 77 A-3500 Krems AUSTRIA

TEL: (43) 2732-899321 FAX: (43) 2732-899506

## Kunshan Foreign Trade Company

Kunshan City 134 Middle Qianjin Road Jiangsu Province CHINA

TEL: (86) 520-7310543 FAX: (86) 520-7302865

#### Societe Kwai & Cie

Boite Postale 251 41 rue du Commerce Tamatave MADAGASCAR

■ Comments: Can also get this company's oils thru the John D. Walsh Company.

# Lakshmi Essential Oil Trading Company

8/72, Vasudeva Road Kuppam 517 425 INDIA

TEL: (91) 812-5059 FAX: (91) 812-264621

# La Mesta Chimie Fine-Inspec Group

Pont Charles Albert 06830 Gilette FRANCE

TEL: (33) 9308-1020 FAX: (33) 9308-1240

# Lariza Pte Ltd

9 Battery Road Straits Trading Bldg. 1401 Singapore 0104 SINGAPORE TEL: (65) 916581

#### **Laserson Chemie Fine**

BP 57, Zone Industrielle 91151 Etampes Cedex FRANCE

TEL: (33) 1-6494-3124 FAX: (33) 1-6494-9897

# OR Barnet Products Corp.

560 Sylvan Avenue Englewood Cliffs, NJ 07632

TEL: 201-569-6622 FAX: 201-569-8847

#### La Tour Ltda

Apartado Aero 2296 Cali

COLUMBIA

TEL: (57) 92-8821708 FAX: (57) 92-8836411

#### Linz GmbH

St. Peter Strasse 25 A-4021 Linz AUSTRIA

TEL: (43) 70-59160 FAX: (43) 70-59163800

#### **Sofia Lluch Saunier**

E-08820 Prat de Llobregat C\Gaiter 140-144 Barcelona SPAIN

TEL: (34) 3-379-3849 FAX: (34) 3-370-6504

#### **LS Materials**

Sudbury P.O. Box 2900 Suffolk C010 OXN ENGLAND

TEL: (44) 1787-311-465 FAX: (44) 1787-311-465

#### Lucta SA

P.O. Box 1112 08080 Barcelona SPAIN

TEL: (34) 3-845-6116 FAX: (34) 3-845-9812

OR 1010 Northern Blnd

Great Neck, NY 11021 TEL: 516-773-4322

FAX: 516-773-4206

■ Comments: Also has branches in

Mexico and Colombia.

#### **Malve Chemicals**

Near Swamy Samarth Kendra Shabri Bldg, Kopar Road Dombivli West

421202 Bombay

INDIA

TEL: (91) 251-452-336 FAX: (91) 22-207-0396

#### V Mane Fils SA

620 Route de Grasse 06620 Le Bar-Sur-Loup

FRANCE

TEL: (33) 9309-7000 FAX: (33) 9342-5425 OR 60 Demarest Drive Wayhe, NJ 07470 TEL: 201-633-5533

FAX: 201-633-5538

■ Comments: Branches in most countries. Nice selection of oils such as fennel, elemi, anise, star anise, etc.

# **Maschmeijer Aromatics Ltd**

GST Road, Chromepet Post Box No. 3 Madras 600 044 INDIA

TEL: (91) 44-2368788 FAX: (91) 44-2366828

#### **Matrix Sdn Bhd**

25A Jalan SS 18/6 Petaling Jaya 47500 MALAYSIA

# Midori Kagaku Co. Ltd.

2-27-8 Minami-Ikebukuro Toshimaku

4F No. 10 Nohagi Bldg

Tokyo 171 JAPAN

TEL: (81) 3-3980-8808 FAX: (81) 3-3980-8805

#### Moellhausen S P A

Via Ponchielli 13

20093 Cologno Monzese

ITALY

TEL: (39) 2-27301-917 FAX: (39) 2-27302-743

#### MPESARL

Chemin du Lac 06130 Le Plan de Grasse FRANCE

TEL: (33) 4-9309-1927

FAX: (33) 4-9377-8988

#### M & S Industries Ltd.

31-33 Ng Fong Street 6-D San Po Kong, KLN HONG KONG

TEL: 852-2752-7603 FAX: 852-2752-7601

# Paul Muggenburg

Hamburg GERMANY

FAX: (49) 4193-92065

■ Comments: The secret supplier for those in the know. Either has or can obtain any plant part, extract or oil in the world. Keep this one hush-hush!

# Muller & Phipps Ltd.

P.O. Box 773 Bombay 400 001

INDIA

TEL: (91) 22-2042544

#### **P T Nabateans Aromatic**

Jln. Sinar Jaya 49 Jakarta, 13230 INDONESIA

TEL: (62) 21-4714735 FAX: (62) 21-4714736

#### **National Aromatics Ltd.**

138, Tilak Bazar Delhi 110006 INDIA

TEL: (91) 11-2528650 FAX: (91) 11-2914267

#### **Natura Internacional SL**

Rio Guadalquivir 4 30130 Beniel SPAIN

TEL: (34) 68-602-426 FAX: (34) 68-602-320

#### Naturalia S A

I-44011 Argenta (FE)

ITALY

TEL: (39) 532-804202 FAX: (39) 532-800857

#### **Nemat Enterprises**

55 Princess Street Bombay 400 002 INDIA

TEL: (91) 2068917

OR 27343 Industrial Blvd. #F Hayward, CA 94545 TEL: 510-782-7247

#### **NIPA Laboratories Ltd.**

Llantwit Fardre, Pontypridd Mid Glam CF38 2SN, Wales

ENGLAND

TEL: (44) 1443-205311 FAX: (44) 1443-207746

# Nippon Zeon Co. Ltd.

6-1 Marunouchi 2-chome Specialty Chemicals, Furukawa Sogo Bldg.

Chiyoda-ku, Tokyo, 100 JAPAN

TEL: (81) 3-3216-0542 FAX: (81) 3-3216-1303

#### **Nishant Aromas**

TJ Road, Cotton Green 424 Milan Industrial Estate Bombay 400 033 INDIA

TEL: (91) 22-413-9058 FAX: (91) 22-414-6502

#### Ogawa & Co. Ltd.

Chuo-ku 4-1-11 Nihonbashi Honcho Tokyo, 103 JAPAN

TEL: (81) 3-3270-1541 FAX: (81) 3-3241-6514

#### Okhla Chemicals Ltd.

21 Nehru Place New Delhi 110 019 INDIA

TEL: (91) 11-647-4701 FAX: (91) 11-647-4718

#### **Orient Industries**

YingBin Road Orient Plaza GongBei, Zhuhai CHINA

TEL: (86) 756-8886019 FAX: (86) 756-8885819

#### Owinner Ltd.

21-24 Connaught Road West Seaview Comm. Bldg., Room 1405 HONG KONG

TEL: (852) 2546-2636 FAX: (852) 2546-0125

#### Panoil Ltd.

Bow Island P.O. Box 369 Alberta Tokogo

CANADA TEL: 403-545-6566

FAX: 403-545-6567

#### Payan & Bertrand

BP 57

28 Avenue Jean XXIII 06332 Grasse Cedex

FRANCE

TEL: (33) 4-93-40-1414 FAX: (33) 4-93-40-1030

■ Comments: Full line of essential oils. Very comprehensive. Includes

sassy and calamus.

# PCAS Prod. Chim. Aux Synthese

23, rue Bossuet BP 111, Zl de la Vigne-aux-Loups Longjumeau 91160 FRANCE

TEL: (33) 1-6909-7785 FAX: (33) 1-6448-2319

#### Pembroek B V

P.O. Box 305 88A, Slaveikov Str., ap.18 6000 Stara Zagora BULGARIA

TEL: (359) 42-32063 FAX: (359) 42-32063

#### **PFW Aroma Chemicals B V**

P.O. Box 414 Nijverheidsweg 60 3770 AK Barneveld NETHERLANDS OR P.O. Box 1009

Milford, PA 18337 TEL: 717-296-6333 FAX: 717-296-5020

■ Comments: Has outlets in France,

Spain, U.K., etc.

#### **Pharmachim**

16 Ilienski Chausee 1220 Sofia BULGARIA

TEL: (359) 2-38501 FAX: (359) 2-388138

■ Comments: Has all manner of dill

oils.

#### PRIVI Organics Pvt. Ltd.

205 Princess Street Bombay 400 002 INDIA

TEL: (91) 22-206-2626 FAX: (91) 22-208-0282

#### **Podarome**

48 Avenue Riou-Blanquet

Grasse 06130 FRANCE

TEL: (33) 4-9292-3480 FAX: (33) 4-9242-3485

# **Prodasynth SA**

Parc Industriel Des Bois De Grasse 06130 Grasse

FRANCE

TEL: (33) 4-9309-0011 FAX: (33) 4-9309-0088

#### P T Prodexco

11a, Jalan Purwosari Semarang 50125 INDONESIA

TEL: (62) 24-540198 FAX: (62) 24517571

#### **Proimpex Agro Industries**

Ambodivonikely, Ambohimanarina Lot I V B 6 Antananarivo MADAGASCAR

TEL: (261) 2-31873

#### **Puressence Wuersten Inc.**

P.O. Box 2058 Zurich

SWITZERLAND

TEL: (41) 1-363-0923 FAX: (41) 1-363-6544

#### **Quest Fragrances**

Ashford

Fragrance Division Kent TN24 OLT ENGLAND

TEL: (44) 1233-644-444 FAX: (44) 1233-644-146 OR 400 International Drive Mount Olive, NJ 07828

> TEL: 201-691-7100 FAX: 201-691-7479

■ Comments: Huge multinational company with branches in most countries.

#### Radha Sales Corporation

M-33 Connaught Circus 304 Avg Bhawan New Delhi 110 001 INDIA

TEL: (91) 11-331-7722 FAX: (91) 11-353-318

#### Reincke & Fichtner GmbH

Grosser Burstah 36-38 D-20457 Hamburg GERMANY

TEL: (49) 40-364486 FAX: (49) 40-366294

# **Laboratoire Monique Remy**

Bois de Grasse Parc Industriel des F-06130 Grasse FRANCE

TEL: (33) 4-9242-4344 FAX: (33) 4-9270-4326

OR M. Wytenhove Inc. 200 Hudson Street, 9th Floor

> New York, NY 10013 TEL: 212-966-4515 FAX: 212-925-8363

#### H Reynaud et Fils

F-26570 Montbrun-les-Bains FRANCE

TEL: (33) 4-7528-0255 FAX: (33) 4-7528-8466

# Rhone-Poulenc Specialities Chemiques

Chimie Fine - Cedex 29 F-92097 Paris la Defense TEL: (33) 4768-1234

FAX: (33) 4768-0176

#### **Robertet SA**

BP 100

37 Avenue Sidi-Brahim

06130 Grasse

FRANCE

TEL: (33) 4-9340-3366 FAX: (33) 4-9370-6809

OR 125 Bauer Drive

Oakland, NJ 07436-3190 TEL: 201-337-7100 FAX: 201-337-0070

■ Comments: Branches in most countries. Has everything but sassy. Even has bitter almond oil and calamus. Looks good.

#### **C E Roper**

Klosterallee 74 D-2000 Hamburg 13 GERMANY

TEL: (49) 40-448875

### Rupangi Impex Ltd.

C.G. Road, Navrangpura Agrawal Complex, 4th Floor Ahmedabad 380 009

INDIA

TEL: (91) 79-656-4744 FAX: (91) 79-656-4745 OR **Unibar Corporation** 

> 6222 Richmond, Suite 215 Houston, TX 77057

TEL: 713-977-5160 FAX: 713-977-1284

# Russo & Ruegg SPA

P.O. Box 252 I-98100 Messina

ITALY

TEL: (39) 90-2927762

# Sabores y Fragrancias SA

1646 San Fernando Brandzen 883 Prov de Buenos Aires

ARGENTINA

TEL: (54) 1-746-9400 FAX: (54) 1-745-8392

#### Saf Bulk Chemical

38297 Saint Quentin Fallavier BP 705 Cedex FRANCE

TEL: (33) 4-7482-2882 FAX: (33) 4-7482-2890

#### San-Ei Gen F.F.I., Inc.

Toyonaka 1-11 Sanwa-cho Osaka 561 JAPAN

TEL: (81) 6-333-0521 FAX: (81) 6-333-0520

#### P T Sarana Bela Nusa

Pisangan Timur Jln. Sinar Jaya 49 Jakarta 13230 INDONESIA

TEL: (62) 21-472-2360 FAX: (62) 21-471-4736

#### Dr. Scholvien GmbH & Co.

PO 20 02 10 Am Schlangengraben 5 D-1000 Berlin 20 GERMANY

TEL: (49) 3033-0870 FAX: (49) 3033-0871

# **OR Hartog Trading Co**

20 E 46th Street New York, NY 10017 TEL: 212-687-2000 FAX: 212-687-2659

OR Wild Flavors Inc.

890 Redna Terrace Cincinnati, OH 45215 TEL: 513-771-5904 FAX: 513-771-6910

#### Selarom Srl

Via Modena 3-5 20090 Buccinasco ITALY

TEL: (39) 2-488-3800 FAX: (39) 2-488-3776

### Sellam Haddou el Younsi

P.O. Box 325 Tetouan MOROCCO

TEL: (212) 996-7291

■ Comments: They just sell myrtle oil as far as I know. But call 'em up and ask them.

#### D D Shah & Co.

115 Princess Street Damodar Bldg. Bombay 400 002 INDIA

TEL: (91) 22-285-0577 FAX: (91) 22-285-0581

■ Comments: Yeesh! Isn't this like the millionth essential oil or chem company on this "Princess Street" in Bombay. That street must be heaven.

# Shanghai Cereals & Oils

11 Hankou Road China National Cereals, Oils and Foods Shanghai CHINA

TEL: (86) 21-6321-9760 FAX: (86) 21-6324-8865

# Shanghai Cosfra Ltd.

Beijing Road West No. 3 Lane 1231 Shanghai 200040 CHINA

TEL: (86) 21-5693-5807 FAX: (86) 21-5693-5815

# Shanghai Native Produce Import & Export Corporation

18 Dian Chi Road Shanghai 100002 CHINA

TEL: (86) 21-321-5680 FAX: (86) 21-329-1465

# Shin-Etsu Chemical Company Ltd.

2-chome, Chiyoda-ku 6-1, Ohtemachi Tokyo 100 JAPAN

TEL: (81) 3-3246-5280 FAX: (81) 3-3246-5371

#### Shiono Koryo Kaishe Ltd Chuo-ku

1-6 Doshomachi Sanchome Osaka 541 JAPAN

TEL: (81) 6-231-3013 FAX: (81) 6-229-8316

#### **Shree Veer Chemicals**

23/3 East Patel Nagar New Delhi 110 008 INDIA

TEL: (91) 11-575-5209

#### Silvestris & Szilas

P.O. Box 10 Vasut u. 42 Kerepestarcsa H-2143 HUNGARY

TEL: (36) 28-480-675 FAX: (36) 28-482-099

■ Comments: The biggest essential oil producer of Hungary and the biggest supplier of parsley oils in the world. Has all sorts of dill oils, fennel and taragon oils. Is also the only commercial source on the planet that I could find for the very interesting parsnip oil. This company is the bomb. And if you call, be prepared to be greeted by the friendliest, sexiest sounding voice that I have ever heard. I'm in love, dude!

# Sino-Beibu Bay Aroma Industries Ltd.

254-256 Des Voeux Road 13th Floor Finance Building Central Hong Kong HONG KONG

# Sinochem Tianjin Import & Export Corporation

58 Nanjing Road Tianjin CHINA

TEL: (86) 22-331-1290 FAX: (86) 22-230-1412

#### Som Extracts Ltd.

Shakarpur, Vikas Marg Dua Complex 24 Veer Savarkar Delhi, 110-092

INDIA

TEL: (91) 11-224-4035 FAX: (91) 22-204-7657

#### Soofi Exports

211 Nariman Point 1317 Dalamal Tower Bombay 400 021 INDIA

TEL: (91) 22-204-3044 FAX: (91) 22-204-7657

■ Comments: They have calamus.

#### SPPM

Box 852 Antananarivo MADAGASCAR TEL: (261) 2-46408

FAX: (261) 08-46029

#### **Srilarome**

FF-7, 16 Plain Street The Greenery Bangalore 560 001

INDIA

TEL: (91) 80-286-6999 FAX: (91) 80-286-2751

# Stafford Specialty Ingredients Ltd.

Long Melford Sudbury Suffolk CO10 7HU

**ENGLAND** 

TEL: (44) 181-5314211 FAX: (44) 181-5276351

#### Standard Essential Oil Distillers

Near Juhi Rly

84/113 Carvalhonagar Kanpur 208 003 UP

INDIA

TEL: (91) 45658

# Synarome SA

**BP 20** 

40 rue Raspail

92270 Bois Colombes

FRANCE

TEL: (33) 1-4242-5323 FAX: (33) 1-4786-3080 OR 200 Hudson Street

New York, NY 10013 TEL: 212-431-0081 FAX: 212-925-8363

■ Comments: Has other offices in most of the European countries. Is mainly a pure aromatic chemical manufacturer. Why don't you make small talk with the NY office by saying that you noticed they are at the same address as the M. Wytenhove Inc. (The distributor for a competing company: Laboratorie Monique Remy). "Oh ha ha ha! Do I have some stories. Don't get me started on Remy. But seriously folks. . . have you ever considered Satan as your true savior?"

# Synthite Industrial Chemicals

Kolencherry - 682 311

Kerala INDIA

TEL: (91) 484-373503 FAX: (91) 484-370405

# Takasago International Corporation

Minato-ku 3-19-22 Takanawa Tokyo JAPAN OR 11 Volvo Drive

Rockleigh, NJ 07647 TEL: 201-767-9001

FAX: 201-784-7244

#### Tanemura & Co Ltd

3-9 Shibadaimon 2-chome Minato-ku Tokyo 105

JAPAN

TEL: (81) 3-3578-7011 FAX: (81) 3-3578-7005

#### **Tasman Extracts**

Factory Road Brightwater Nelson

**NEW ZEALAND** 

TEL: (64) 3-542-3895 FAX: (64) 3-524-4012

#### Technova India Pty. Ltd.

A-10, Green Park New Delhi 110 016

INDIA

TEL: (91) 11-655-766 FAX: (91) 11-686-3576

#### TMV Aromatics Pvt. Ltd.

Industrial Development Plot Plot #66C Kalamassery Cochin 683 109 INDIA

TEL: (91) 484-361-330 FAX: (91) 484-373-121

#### **Tournaire SA**

BP 4

50 route de la Paoute LE PLAN

06338 Grasse, cedex

FRANCE

TEL: (33) 4-9309-3434 FAX: (33) 4-9309-3400

#### OR O. Berk International Inc.

777 Jefferson Ave. Union, NJ 07083

TEL: 908-687-7720 FAX: 908-687-5157

#### R C Treatt & Co. Ltd.

Northern Way

Bury St.

Edmunds IP32 6NL

**ENGLAND** 

TEL: (44) 1284-702-500 FAX: (44) 1284-703-809

OR 3100 Highway 17-92 West

Haines City, FL 33845 TEL: 813-421-4708 FAX: 813-422-5930

## **Tropikal SA**

Moroni

BP 1194

R.F.I. des Comores

FRANCE

TEL: (33) 269-73-1908 FAX: (33) 269-73-1333

#### Ultra International Pvt. Ltd.

M-3 Connaught Circus 304 Avg Bhawan New Delhi 110 001 INDIA

TEL: (91) 11-332-4100 FAX: (91) 11-331-7776

#### UNPAL

Col. Sto. Domingo Mexico 18 DF MEXICO

TEL: (52) 5-516-8035

#### **Usines Lambiotte**

3 rue Auguste Lambiotte 58700 Premery FRANCE

TEL: (33) 8637-7200 FAX: (33) 8637-7227

#### **VF Aromatique**

23, rue du Renard 75004 Paris FRANCE

TEL: (33) 1-4271-9111 FAX: (33) 1-4277-4684

# Vicente Trapani SA

Casilla de Correo 247 4000 Tucuman ARGENTINA

TEL: (54) 81-506100 FAX: (54) 81-506125

#### S A Albert Vielle

**BP 41** 

629 Route de Grasse 06221 Vallauris Cedex

FRANCE

TEL: (33) 4-9364-1672 FAX: (33) 4-9364-8007

# **Vioryl Chemical & Agricultural**

Vitaniotis Street Industry Research SA 14564 Kifissia GREECE

TEL: (30) 1-807-4603 FAX: (30) 1-807-4681

# Virat Exports Pvt. Ltd.

23/3 East Patei Nagar New Delhi 110008 INDIA

TEL: (91) 11-5767182 FAX: (91) 11-5755209

#### **Warwick France**

26 rue Vignon 75009 Paris FRANCE

TEL: (33) 1-4451-5005 FAX: (33) 1-4451-5019

# Rudolf Wild GmbH & Co. KG

Rudolf Wild Strasse 4-6 D-Eppelheim-Heidelberg

**GERMANY** 

TEL: (49) 6221-799541 FAX: (49) 6221-799398

#### Alfred L. Wolff GmbH

Grosse Backerstrasse 13 Sudanhaus Hamburg 1, D-2000 GERMANY

TEL: (49) 40-36-29-71 FAX: (49) 40-36-39-12

### Yasuhara Chemical

Fuchu City 1080 Takagi-cho Hiroshima, 726 JAPAN

TEL: (81) 82-847-453530 FAX: (81) 82-849-458639

#### **Yinca Ltd**

610 Nathan Road, Mangkok Room 1701 Hollywood Plaza Kowloon HONG KONG

TEL: (852) 2332-2308 FAX: (852) 2771-4988

# **Erich Ziegler GmbH**

Am Weiher 133 D-Aufsess GERMANY

TEL: (49) 9198-92940 FAX: (49) 9198-929423

#### Zylepsis Ltd.

Hemview Business Estate 6 High Point Ashford TN24 8DH ENGLAND

# **Organizations**

So ya don't like none of the essential oil sources I've given ya? Well, the hell with you then! Here! Go ask someone else you ingrate!

# American Alliance of Aromatherapy

P.O. Box 750428 Petaluma, CA 94975

TEL: 503-392-4006 FAX: 503-392-4544 URL: www.aaoa.org

# American Society of Perfumers

P.O. Box 1551

West Caldwell, NJ 07004 TEL: 908-549-1052

# American Spice Trade Association

560 Sylvan Avenue Englewood Cliffs, NJ 07632

TEL: 201-568-2163

FAX: 201-568-7318

# Associacion Nacional de Fabricantes de Parfumeria y Afines

San Bernardo, 23, 2 E-28015 Madrid

SPAIN

TEL: (34) 1-542-1616 FAX: (34) 1-559-0137

# Australian Society of Perfumers and Flanourists

Givaudan Roure Australia 96 South Creek Road DeeWhy NSW 2099 AUSTRALIA

TEL: (61) 2-982-7011 FAX: (61) 2-931-7007

# **British Fragrance Association**

6 Catherine Street London WC2B 5JJ

ENGLAND

TEL: (44) 171-836-2460 FAX: (44) 171-836-0580

# **British Society of Flavourists**

c/o Borthwicks Flavours Dennington Estate Wellingborough Northants NN8 2QJ

**ENGLAND** 

TEL: (44) 1193-344-0022 FAX: (44) 1193-344-0053

# Canadian Cosmetic, Toiletry & Fragrance Association

5090 Explorer Drive, Suite 510 Mississauga, Ontario L4W 4T9

CANADA

TEL: 905-629-0111 FAX: 905-629-0112

# Canadian Fragrance Materials Association

98 Walker Drive Brampton, Ontario L6T 4H6

TEL: 905-793-9921 FAX: 905-458-0914

# Chemical Sources Association &

Flavor & Extract Manufacturers
Association

&

# Fragrance Materials Association

1620 I Street, NW - Suite 925 Washington, DC 20006

TEL: 202-293-5800 FAX: 202-463-8998

■ Comments: Yup, three organizations at the same address. Don't be surprised if the very rude receptionist that answers the phone gives a totally unrelated declaration that you have reached the offices of Smith, Jones and Brown (not the real names but it was the names of a law firm-like place). Just state your business, this is the place.

# European Flavour & Fragrance Association

Square Marie-Louise, 49 Althanstrasse 14 B-1040 Brussels BELGIUM

TEL: (32) 2238-9837 FAX: (32) 2230-0265

# The Fragrance Foundation

145 East 32nd Street New York, NY 10016 TEL: 212-725-2755 FAX: 212-779-9058

# **German Society of Perfumers**

SEPAWA Geschaftstelle Bodenstrasse 24 37603 Holzminden GERMANY

# Guatemalan Essential Oil Producers Association

APDO Postal 272 6a Calle 1/36, Zona 10 Guatemala City GUATEMALA

## Herb Growing & Marketing Network

P.O. Box 245 Silver Spring, PA 17575 TEL: 717-393-3295

FAX: 717-393-9261

# International Federation of Aromatherapists

Stamford House 2/4 Chiswick High Road

London W4 1TH ENGLAND

TEL: (44) 181-742-2605

# International Federation of Essential Oils & Aroma Trades

Federation House 6 Catherine Street London WC2B 5JJ ENGLAND

TEL: (44) 171-836-2460 FAX: (44) 171-836-0580

# International Fragrance Association

8, Rue Charles-Humbert CH-1205 Geneva SWITZERLAND

TEL: (41) 2232-13548 FAX: (41) 2278-11860

#### ISIPC

&

#### Societe Française des Perfumeurs

36 rue du Parc de Clagny 78000 Versailles

FRANCE

TEL: (33) 39-54-8582 FAX: (33) 39-54-4384

# Japan Flavor & Fragrance Manufacturers' Association

Nomura Bldg. 14-14 Nihonbashi-Kodenmacho Chuo-ku Tokyo 103 JAPAN

TEL: (81) 3-3663-2471 FAX: (81) 3-3668-7159

# National Association of Fruits, Flavors & Syrups, Inc.

5 Ravine Drive Matawan, NJ 07747 TEL: 908-583-8272 FAX: 908-583-0798

# Natural Oils Research Association

894H Route 52 Beacon, NY 12508 OR P.O. Box 1604 Windsor Berks SL4 3YR ENGLAND

TEL (USA): 914-838-4340

### Olfactory Research Fund Ltd. 145 East 32nd Street

New York, NY 10016 TEL: 212-725-2755 FAX: 212-779-9058

# Pacific Coast Association of Aromatherapy

2015 Paul's Terrace Victoria, BC V8N 2Z4 CANADA

TEL: 604-472-8376 FAX: 604-472-8369

# Pacific Institute of Aromatherapy

P.O. Box 6723 San Rafael, CA 94903 TEL: 415-479-9121

FAX: 415-479-0119

# Perfumes & Flavors Association of India

Navinchandra-Ranchhoddas-Shah Hall 2-B, Court Chambers, 35 Sir Vithaldas Thackersey Marg. Bombay 400 010 INDIA

TEL: (91) 22-20-05875

#### **Parfumerie und Kosmetik**

Breslauer Str. 7 63654 Budingen GERMANY TEL: (49) 60-49-76

TEL: (49) 60-49-7684 FAX: (49) 60-49-7684

# Research Institute for Fragrance Materials

Two University Plaza Drive, Suite 406 Hackensack, NJ 07601-6209

TEL: 201-488-5527 FAX: 201-488-5594

# Soap, Perfumery & Cosmetics

Wilmington House, Church Hill Wilmington, Dartford Kent DA2 7EF ENGLAND

TEL: (44) 1322-277788 FAX: (44) 1322-276474

# Societe Grassoise de Parfumerie

12, Boulevard Pasteur SGP Selin F-06130 Grasse FRANCE

TEL: (33) 4-9336-0618 FAX: (33) 4-9336-0885

### Vereinigung Deutscher Riechstoff

Meckenheimer Allee 87 D-5300 Bonn 1 GERMANY

TEL: (49) 228-653-711 FAX: (49) 228-637-940

# **Import and Export**

You think that sounds too ambitious? Well, it ain't. And I'm gonna prove it to you! I'll admit I don't know much about customs laws and stuff with their harmonized-whatsits and duty-thingamajigs. In fact I don't know crap about it. But I do know what I want and so this is what I did.

I was having this premonition that the majority of suspicion and inaccessibility to chemicals and science ware was occurring at the retail level. Stores are either not selling to the public or they are selling to the public with the idea that their records are open to inspection by the DEA or somebody. Either way, the only viable point for a nation to monitor its citizens' chemical consumption is at the stores of purchase. But remember this very important fact: all of the chemicals needed are legal to own and purchase. If I could conger hydrobromic acid out of thin air and use it in my back yard I could do so. It's legal. All I would be doing is avoiding the middleman chem seller. The one solitary point my government snoops upon to see what I'm legally purchasing. In other words, if only I could find a source of chemicals that was not subject to a warrantless search by my own government then I would be OK. Since all I will be buying are legal chemicals it wouldn't matter where I get them. Indeed it doesn't.

But where oh where can I find this fairytale place that will sell me chemicals yet is not subject to the laws of scrutiny of my own country? Well, how about every country on earth except the United States. And folks, I really do mean every country!

I started off my quest in this matter by making some comparison shopping in countries other than the U.S. Using foreign yellow pages listings and internet searches I found a few chem dealers in Ireland and Britain and called them up. I would pose myself as a British citizen and ask if they would sell certain chemicals to me. Damn if those Brits aren't the most polite and helpful people I've talked to. And they were equally polite and apologetic in explaining to me how, as a Briton, I needed a "Poison License" or some such thing to get most of the quasi hazardous (read that as "useful") chemicals I wanted. I had been aware of this poison license thing for a while and these phone calls confirmed it for me. I'm feelin' for ya, Brits! You've definitely got a sorrier lot than us in regards to chemicals. But keep reading. It may get better for ya a few paragraphs away.

However, when I called them back and told them I was calling from the U.S., their whole tune changed. Initially they were surprised that a U.S. "company" would request reagents and chemicals all the way from Britain, but if I was willing to pay the shipping they were more than happy to send it to me. Why? Because I'm not in Britain, that's why! I am not held to any of their laws because I'm not governed by them.

And if you think there are any international or U.N. commerce laws and restrictions on chemicals that are not even restricted in the U.S., then you had better think again. Because there are none! International trade on chemicals is completely open in these matters. It is all controlled or scrutinized at the point of purchase.

So talking to the U.K. let me know that a country with some of the toughest internal restrictions was completely open to sending stuff anywhere else. I next called Australia because I knew that their government won't even let its citizens read certain chemistry books, much less get research chemicals. And wouldn't ya know it, their chem companies were also perfectly willing to ship to the U.S.

So it was becoming obvious to me that other countries' chem companies

were happy to send to the U.S. They didn't even care about my "company's" credentials! Just as long as they got my money first. hat's all fine and dandy for us Yanks. But what about my sisters back in the U.K. and Australia. Well, I decided to do some talking to a few good old American companies to see what's up.

Let me tell ya, folks. It sure is easy to talk to U.S. chem companies after you tell 'em you're from another country. They had absolutely no interest as to what my intentions were or whether my company had bank credentials or DEA permits. Nothing! Like their U.K. and Aussie counterparts, some U.S. companies thought it odd that someone would go overseas to get these things but none (I mean absolutely zero) of the companies had a problem sending anything to anyone in any other country.

A lot of the company reps I spoke to had no idea if their company had ever sent anything to Britain or Australia or anywhere at all overseas. Usually they would put me on hold to consult with higher-up sales managers to see if they could do it. Without exception, the company agreed to do so with no problems. Please, please take note of this, my foreign friends. This is legal, undiscovered areas of commerce to these American companies. They have no more reason to deny it or report it than they would any industrial customer. Besides, who are they gonna report it to and under whose law are they restricted in selling it to you? No one's!

#### CUSTOMS

So it's obvious to me that there's no problem finding anyone in the world willing to sell me what I need and send it to my country (the good old U.S.A.) But now we come to the biggest question of all: "What about Customs?" [Shudder! Shudder!] I mean to say that they are the last and only line of defense between my chemical sitting on the cargo ship and myself. After my chemical passes through customs it's on a regular old delivery truck heading towards my house. No strings attached!

The hell with that idea! If the DEA likes to "watch" things when they're purchased in this country then surely they are watching Customs for the same things coming into the country. So I call up the main Customs center for my area which is in the city of Laredo located on the border between Texas and Mexico:

Cus: "U.S. Customs"

**Me**: "Yes, I was told to call you guys to find out any restrictions or notifications regarding a couple of items."

[I hear all sorts of noises over the phone, car motors roaring. Chickens clucking. Mentalking. Keyboards clicking. ounded really busy down there.]

Cus: "Are these items for export or import?"

Me: "Import."

Cus: "OK. What are the items?"

Me: "The first is Sassafras Oil. It's a fragrance oil."

[MUMBLE MUMBLE. . . CLICKETY CLICK]

[FROM SOME GUY IN BACKGROUND] "Sassa - what?"

Cus: "Never mind. . . Jeez!"

Me: "Giggle!" [Giggle, folks. Remember to always giggle!"]

Cus: "OK, sassafras oil. No duties. No notification".

Me (GETTING BOLDER): "But I was under the impression that this was a DEA regulated item."

Cus: "Says nothing about that here."

Me: "So I can walk thru Customs with it?"

Cus: "Yes."

**Me**: "Well. . . OK. The other item I needed to ask about was Lithium Aluminum Hydride."

[A minute's worth of clicking followed.]

Cus: "There's a 4% duty fee for this but nothing else."

Yikes! This was getting really scary! I figured there was some sort of catch to all this so I next paid a visit to a licensed customs broker in my fair city.

Just so you know, a customs broker is a dude who you pay to coordinate and facilitate the import of items from abroad. The man I talked to was really nice and really knew his shit. I explained to him that I was considering opening a company and was looking to get some of the items I needed from overseas. The foreign prices were just too low for me to pass up. The trouble with some of these items, I explained, was that I was not sure if they were regulated by the DEA or required notification to the DEA. I told the broker that in some cases regarding sales in the U.S., some of the items I needed required notification to the DEA and I was not sure if the same applied to the import of these items. Lastly, I told him that I was rather sick of the constant run-ins with the DEA, EPA and FDA over my product sources and that I would just as soon buy American than foreign if the scrutiny was the same.

The broker said he understood and said that internal Federal hassles were often a reason why people imported. So he pulls out these enormous sets of books and turns his computer screen towards me so that we can both see it. He explained that the books were these "Harmonized" something-or-other books that were the defacto regulation books used by customs. The software program was merely the books in computer form. He said that everything we were looking at was exactly what Customs uses and obeys. This was it. Nothing more, nothing less. Whatever these Federal Customs regulations tell the Customs officer to do regarding an item then that is what they do with it. Nothing more, nothing less.

So I again start off my questioning with Sassafras Oil and Lithium Aluminum Hydride:

Bro: "Says here on the Sassafras Oil that there are no duties or tariffs. No notification. You see this column here about 'special instructions'? If there were any requirements for Customs to notify another agency it would be here." Me: "So the Customs office just passes the Sassafras Oil thru and that's it?!"

**Bro:** "Yes. The same is true with the Lithium aluminum Hydride. Except that a duty tax of 4% of the total cost of the item is required before it is released. This is most likely due to the fact that it is listed as hazardous material and they just want to milk you for some money because the stuff requires them to tiptoe when carrying it."

Me: "Well, that doesn't sound bad at all. Do you mind if I ask you about a few more items?"

Bro: "Go ahead."

So we spent the next 20 minutes going over a wish list of supposedly "watched" chemicals and things. It was astonishing.

Mercuric Chloride: None

Sodium Cyanoborohydride: 6% haz com

2,5 Dimethoxybenzaldehyde: None

Allylbenzene: None

Calamus Oil: FDA notification

(I called the FDA in Dallas and was told that notification was only in case the intended use of the Calamus was listed as being for food. Which is the only use Calamus is banned for.)

This went on and on so I decided to stop. I signed a card promising that should I need a customs broker it would be this man. Indeed he was very nice and helpful.

I have yet to order anything from abroad except for some small sampler bottles of essential oils. But after talking extensively to companies, Customs and a nice customs broker, I have come to the tentative conclusion that import may very well turn out to be a godsend. Some other pointers that I have learned may help you better understand and use the process.

A lot of the foreign industrial manufacturers (the really big guys) tell me, as does my broker, that they don't like to waste their time exporting small (1 kg or less) quantities of stuff. Granted, their prices per kg are extraordinary, but you better be prepared to get a drum. I am a firm believer that anything can be had for a price. And I'm fairly certain that smaller quantities can be negotiated no sweat.

Many of the foreign companies don't take credit cards and are used to having their payment wired to them usually as a bank transfer. In such a case one just hands some \$100 bills to a bank teller and asks her to send the balance to the foreign company's bank account.

To me, Asia and Eastern Europe looks the most attractive of all. With so little restraint on their industries, those Asian nations are belching out cheap chemicals and oils with reckless abandon. And none of them could give a rat's ass who buys their shit and what they do with it. Oh baby, are their prices low, too. But who wants to send their money to Comrade Mao and hope they won't get burned?

And who wants to deal with all the intricacies of import: the duties required at the overseas port, the duties required at Customs, the proper paperwork necessary for Customs? Although smaller, retail-like companies (esp. those in the essential oils and lab supply) can usually negotiate things from their end and have your stuff swiftly thru Customs, most places cannot. Especially the chemical manufacturers.

For all these reasons I'm begging you to hire a customs broker. To show you how uncomplicated my customs broker made things for me, let me tell you how a scenario played out between him and me. Earlier that week I had contacted and received two quotes from two different Asian companies. One in Shanghai, China was willing to sell me 1 kg of NaBH3CN for \$350. The other in Thailand was quoting me \$500 for a 55-gallon drum of Asian camphor oil. And my broker explained how that was all I needed to do.

All that is required of me is to find a company and give my broker the addresses and the money. So while I'm sitting in my back yard drinking a pina colada, he's takin' care of business. He calls the companies and confirms the orders. He has the two disparate products sent to a single overseas shipper so that they are consolidated as one package for the big transport to the good old US of A. He takes care of wiring the money and making sure I don't get burned. He negotiates all foreign tariffs and duties. And, most importantly, he has the proper paper work ready and waiting at U.S. Customs so that my package is swiftly and uneventfully passed thru Customs and on the way to my house. his, by the way, also includes getting a proper US. Shipper (UPS, FedEx) to pick up my package from Customs.

And how much was all this going to cost me? About \$100. And how long would the whole thing play out? Just a few days! This is business in the late 1990's, folks. International shipping and commerce is as beholden to speed as any U.S. transaction is.

Of course, I never made the deal with my broker that day. It was just part of my ongoing investigation. But I can certainly relate to the idea of having a licensed customs broker and his official paperwork championing my stuff thru Customs. Talk about peace of mind. Is all that worth about \$100? You bet your ass it is!

And did my broker require any ID from me? No. Can my stuff be sent to any address? Yes. A friend's house? Yes. A mail box center? Of course!

As it so happened, I ran into a friend a few weeks later and, believe it or not, he had become a customs broker himself a few years back. We chewed the fat over these customs scenarios and he pretty much agreed with what my original broker had told me. BUT, he also told me a very worthy piece of info that you should know as well. You see, when I was relating to my first broker what chemicals I wanted, we were both under the assumption that these chemicals would be for use in my fake business. And what we never got around to discussing was the particulars of the

paperwork that customs requires in that regard. Well, what my friend told me was that if I import anything for a business, then I would have to include some particulars about my business and the intended uses for the products I'm importing. That isn't really a problem to me but it would be nice if that could be avoided. Indeed, his solution was that one need only import these chemicals for personal use only and then no such paperwork will be necessary. So keep that in mind as well, folks. My friend assured me that, in the matters of import, the least amount of hassle and scrutiny is applied to things (any "things") that are intended for personal use.

If any of you are still worried then please try and remember what Customs really is. The DEA can target lab stores and chem stores because that is all they sell. But they cannot monitor Customs. Millions upon millions upon millions of items enter U.S. ports *every single day*. Each and every item has to be approved at lightning-quick speed to avoid chaos. And the unimaginable variety of products is staggering. verything from chicken feet, to hair spray to cruise missiles. Commerce is a monstrosity that no one can legislate in such a manner.

How the Customs agencies work in other countries I haven't a clue. ut lab supply companies in the U.S. that say they specialize in export tell me they know of no hindrances or special restrictions when shipping their products to Britain or Australia. "Even if the customer is an individual and not a company?" I ask. No. The best info for my foreign pals came from some of the "rogue" U.S. chem companies that like for individuals to own chems. They confirmed for me that they have indeed shipped to individuals in Britain and Australia with no troubles at all. One place even boasted of having sent stuff to a private researcher in Japan where, I was told, no one is allowed to own any chemical.

I dunno, folks. It all seems promising to me.

# OTC

San Antonio, Texas USA. My fair city. Home of the Alamo. Home of the beautiful River Walk, a sub-street level paradise of foliage, cafes and shops along the San Antonio River as it winds thru downtown. And, like any city you may live in, home to stores that sell chemicals. So let's take a tour thru my city and see what's on the shelves of some of its stores.

# PHOTOGRAPHY STORE

I started off with the purported source of all chemicals big and small: the photography store. What was hyped as a chemical superstore turned out to be the biggest disappointment of the day. I went to the store that was reported to have the most chems for the avid hobbyist but the following were the only things I found:

- Sodium Sulfite (\$10/454g)
- Potassium Ferricyanide, for lightening negatives (\$2/19g)
- Hydroquinone, used as a developer (\$41.65/1L)
- 28% aq Acetic Acid, used as a "Stop Bath" (\$3.36/473mL)

What a rip! Everything else was just a bunch of premixed solutions of exotic developing agents, detergent and what not. There's this big dude working the counter in the store and sees me plopped down in the middle of his chemical aisle jotting down stuff in my note book. He comes over and asks what I'm up to, and I tell him I'm looking for alternative sources for research chemicals.

As it turns out this guy is an ex-nuclear chemist so we start rapping about chems. I pointed out to him that about half of all the chems listed in the Merck Index give photography as a principal use so why in the hell aren't they here in his store? He said that with the refinement of premade solutions no one has need of basic chemicals. Surely some purists still require the stuff, I say. But he said he never heard of such a thing. Before I left I asked him if he could special order any chems from the Eastman-Kodak fine chemicals division but he said he couldn't.

This was a little puzzling and disappointing to me. What in the hell was everybody talking about when they said that photo shops had all the 'goods'? So I go home and start a few internet searches. All I found were camera and film exchanges. I had pretty much given up on this subject until some nice person posted this URL on a favorite web page of mine:

# http://duke.usask.ca/~holtsg/photo/faq.html#SOURCES

Hello! There the mystery photo chem stores were! The legends were true. So many chems at super low prices. All manners of bromide compounds, phenyl compounds (including catechol), chromic acids, acids, bases, hydroxylamines(!), iodine, solvents, palladium and platinum compounds. Everything! This led me in new search directions to find even more stores. Thanks, bra'! Here are some addresses:

#### **Artcraft Chemicals**

P.O. Box 583

Schenectady, NY 12301

TEL: 518-355-8700

FAX: 518-355-8700

TOLL FREE: 1-800-682-1730

#### **Bostick & Sullivan**

P.O. Box 16639

Santa Fe, NM 87506-6639

TEL: 505-474-0890

FAX: 505-474-2857

#### **Carolina Color & Chemical**

TEL: 704-333-5101

#### **Filmart**

4111 Glenwood Road Brooklyn, NY 11210 TEL: 718-421-3500

FAX: 718-421-6517

TOLL FREE: 1-800-522-2289

#### **First Reaction**

TEL: 603-929-3583

# Photographers Formulary, Inc.

P.O. Box 950

Condon, MT 59862 TEL: 406-754-2891 FAX: 406-754-2896

TOLL FREE: 1-800-922-5255

#### Plecia Photo

7603 Bergenline Avenue North Bergen, NJ 07047 TEL: 201-868-0065

FAX: 201-868-0475

#### Rayco Chemical Company Ltd.

199 King Street Hoyland Barnsley South Yorks S74 9LJ UNITED KINGDOM TEL: (44) 1226-744594

# Silverprint Ltd.

12 Valentine Place London SE1 8QH UNITED KINGDOM

TEL: (44) 171-620-0844 FAX: (44) 171-620-0129

#### Zone V

Stage Road P.O. Box 218

South Strafford, VT 14051 TEL: 802-765-4508

# POOL SUPPLY STORE

Out on Bandera Road, a suburban corridor of nightmarish traffic congestion, I pull into a swimming pool supply store. This is a really small store with no customers and a big farm boy standing behind the counter. I sit down on the floor and start to furiously take notes. I can tell that this is making the farm boy totally nuts! So he comes over and I explain my quest for alternative chem sources. He is very helpful and forthcoming after that. A lot of pure chemicals here. Most of them manufactured by Bio Lab of Decatur, GA.

- Muriatic Acid, HCL @ 31.45% (\$2.99/gal)
- 1-bromo-3-chloro-S, 5 dimethylhydanoin, Brominating/chlorinating chemical (\$130/11.3 kg)
- Trichloro-S-triazinetrione, a sanitizer, (\$120/13.8 kg)
- Sodium tetraborate. Pentahydrate, a balancer/ optimizer (\$86/20.4 kg)
- Potassium Peroximonosulfate, an oxidizing shock treatment, (\$175/ 22.6 kg)
- Sodium bisulfate, 95% (\$5.99/3 lbs.)

- Sodium hydrogen carbonate (\$6.99/4 lbs.)
- Sodium carbonate (\$2.99/2 lbs.)
- NaBr, 88% aq solution, (\$24/2 lbs.)
- H202, 27% aq sold as "Soft Swim" pool shock
- Calcium Hypochlorite
- · Lithium Hypochlorite

#### THE HARDWARE STORE

Screw Builder's Square! They are always rude to me. I therefore shop at Home Depot. Lots of nice stuff. They have most of the swimming pool chems plus those listed below. Most of which were found in or around the paint aisle.

- Acetone
- · Methyl Ethyl Ketone
- Turpentine
- · Mineral Spirits
- Denatured Alcohol
- Xylene
- DCM (as a partial constituent of many stripping agents)
- H3P04 (in unspecified amounts in naval jelly and aluminum cleaners manufactured by Duro)
- · Diatumaceous Earth
- Gypsum (a.k.a. CaS04.2H20)

# ELECTRONICS SUPPLY STORE

Tucked behind the International Airport are a bunch of techno warehouse stores. The electronics store I'm visiting is the kind that sells computer boards and parts, switches, transistors, cables, etc. The major categories of twisted misfit loners of society are all here: computer geeks, unabombers, ham radio operators, me. Interesting chemicals, too. Most of the solvents should be water-free since their purposes are for cleaning circuitry.

- HCL/Ferric Chloride solution, indeterminate amounts, used as a PC board etching solution.
- Isopropyl Alcohol, pure, 100%, lots of brands (\$3.89/pint)
- 1,1,1,2-tetrafluoroethane and other freon substitutes
- Halogen solvents, mostly sold in pressurized canisters as 'jet air' circuit board cleaners
- · Zn, 98.5%, as a sprayable 'cold galvanizer'
- Isohexane
- DCM, 73%, as a constituent of "Fine-L-Kote" coating remover, manufactured by Tech Spray Inc. 1-800-372-8523.
- Nitroethane, as a minor constituent of a cleaner/degreaser called "E Series, Heavy Duty Cleaner/Degreaser 2000" by Chemtronics. 1-800-645-5244.
- Various other solvents as constituents of products.

## THE LOCAL PHARMACY

For this little sojourn I went down to my local drug superstore: Drug Emporium. If they don't got it, you don't want it. For no particular reason, I decided to catalog every damn allergy medication they had. The results of which you can see on the following page in Table I.

# TABLE I. Active Compounds in Prescription Allergy Medications

| PRODUCT NAME              | ACTIVE INGREDIENT   | MATRIX | DOSAGE (MG) |
|---------------------------|---------------------|--------|-------------|
| A.R.M.                    | Phenylpropanolamine | Powder | 25          |
| Actifed                   | Pseudoephedrine     | Powder | 30          |
| Alka-Seltzer Plus Cold    |                     |        |             |
| and Flu                   | Pseudoephedrine     | Gel    | 30          |
| Alka-Seltzer Plus Cold    | Phenylpropanolamine | Powder | 24          |
| Allerest                  | Pseudoephedrine     | Powder | 30          |
| Benadryl Allergy Sinus    | Pseudoephedrine     | Powder | 30          |
| Bromofed                  | Pseudoephedrine     | Syrup  | 30          |
| Chlortrimeton Allergy     |                     | F2 1.0 |             |
| 4 Hour                    | Pseudoephedrine     | Powder | 60          |
| Chlortrimeton Allergy     |                     |        |             |
| 12 Hour                   | Pseudoephedrine     | Powder | 120         |
| Chlortrimeton Allergy     |                     |        |             |
| Nondrowsy                 | Pseudoephedrine     | Powder | 60          |
| Comtrex                   | Pseudoephedrine     | Powder | 30          |
| Congestal                 | Pseudoephedrine     | Powder | 60          |
| Contac Severe Cold        |                     |        |             |
| and Flu                   | Pseudoephedrine     | Powder | 30          |
| Contac 12 Hour Cold       | Phenylpropanolamine | Powder | 75          |
| Demazine                  | Phenylpropanolamine | Syrup  | 12          |
| Dimetapp Cough and        |                     |        |             |
| Decongestant              | Pseudoephedrine     | Syrup  | 12          |
| Dorcol                    | Phenylpropanolamine | Syrup  | 15          |
| Dristan Cold              | Pseudoephedrine     | Powder | 30          |
| Dristan Sinus             | Pseudoephedrine     | Powder | 30          |
| Drixoral Allergy Sinus    | Pseudoephedrine     | Powder | 60          |
| Drixoral Cold and Allergy | Pseudoephedrine     | Powder | 120         |
| Drixoral Nondrowsy        |                     |        |             |
| Decongestant              | Pseudoephedrine     | Powder | 120         |
| Drixoral Cough and        |                     |        |             |
| Congestion                | Pseudoephedrine     | Powder | 60          |
| Guaifed                   | Pseudoephedrine     | Syrup  | 30          |
| Naldecon                  | Phenylpropanolamine | Syrup  | 6           |
| Novahistine DMX           | Pseudoephedrine     | Syrup  | 30          |
| Ornex                     | Pseudoephedrine     | Powder | 30          |
| Pyroxate                  | Phenylpropanolamine | Powder | 25          |
| Robitussin CF             | Phenylpropanolamine | Syrup  | 12          |
| Sinarest                  | Pseudoephedrine     | Powder | 30          |
| Sine-Off                  | Pseudoephedrine     | Powder | 30          |
| Sine-Aid                  | Pseudoephedrine     | Powder | 30          |
| Sinulin                   | Phenylpropanolamine | Powder | 25          |
| Sinutab                   | Pseudoephedrine     | Powder | 30          |
| Sudafed (most types)      | Pseudoephedrine     | Powder | 30          |
| Sudafed 12 Hour           | Pseudoephedrine     | Powder | 120         |
| Sudafed Cold and Allergy  | Pseudoephedrine     | Powder | 60          |
| Teldrin                   | Phenylpropanolamine | Powder | 75          |
| Theraflu                  | Pseudoephedrine     | Powder | 30          |
| Triaminic Cough and       |                     |        |             |
| Decongestant              | Pseudoephedrine     | Syrup  | 12          |
| Triaminicin               | Phenylpropanolamine | Powder | 25          |
| Tylenol Allergy Sinus     | Pseudoephedrine     | Powder | 30          |
| Vicks 44D                 | Pseudoephedrine     | Syrup  | 60          |
| Vicks DayQuil             | Pseudoephedrine     | Gel    | 30          |
| Vicks NyQuil              | Pseudoephedrine     | Gel    | 30          |

There's a little more to it than what you see in the table. For instance, the packages with pills containing a max amount of active ingredients (say 120 mg) usually have a fewer number of pills. For the most part, all packages contained relatively equal amounts of total active ingredients. This includes the syrups. However, there are a few exceptions and some interesting observations you may wish to consider.

The Congestal (@ 60 mg/cap) is incredibly low-priced compared to others and I rate it a best buy. The Sinutab (@ 30 mg/cap), with 36 pills for \$5, is another contender as it gives a lot of bang for the buck. People worrying about the fillers and binders these products contain may wish to consider the syrups as sources. The alcohol in the syrups can be boiled off, diluted with water and acidified to freebase (I guess). Also, the Alka-Seltzer Plus Cold appears to be a little different from other products. At \$6 for 36 tables it is a good bargain outright, but the tablets are of the "effervescent" variety and are designed to dissolve all badass in water. Hmmm? Just somethin' to think about. Don't forget about them diet pills! Dexatrim, Accutrim, Permathene, etc. all have 75 mg each of PPA.

Most pharmacies, such as mine, still retain the remnants from their ancestors when medicine was based on chemicals and salts from the earth. And there will always be a section devoted to homeopathic and curative chemicals. The following is a list of what my pharmacy has on its shelves:

- Hydrogen Peroxide (3%)
- Isopropyl Alcohol (rubbing alcohol, 70%)
- Sulfur (flowers of sulfur)
- Iodine (2% aq)
- Calcium Carbonate (as an antacid or as a Ca supplement)
- Magnesium Oxide (as a Mg supplement)
- Magnesium Carbonate (as a Mg supplement)
- Activated Charcoal (a.k.a. activated carbon)

Homeopathic single ingredient products included two identical product lines from Hyland's (made by P&S Laboratories of Los Angeles) and by Botran (from France). Each of the following were 500 g bottles at \$6 each:

- · Calcium Fluoride
- Calcium Phosphate
- · Calcium Sulfate
- Iron Phosphate
- · Potassium Chloride

- · Potassium Phosphate
- · Potassium Sulfate
- · Magnesium Phosphate
- Sodium Phosphate
- Sodium Sulfate

There are, of course, various organic compounds around the store. But the most notable to me were the phenylalanine and tyrosine Amino Acid supplements and a homeopathic toothache medication which was 80% eugenol.

# THE CERAMICS STORE

Had a hunch there might be some precious metal compounds in the glazes potters use so I drove down to the most stocked store in town. Wouldn't you know it, the little warehouse is 20 yards from the enormous downtown County Detention Center. That place (the jail) is givin' me the creeps. I'll betcha there's a lot of abusive, sinister people in there. Inmates, too!

So I walk into the ceramics store and boy does it smell weird. There's lots of bags of stuff and piles of earthy lookin' materials. In Table II is a price list of their products. Jackpot!

TABLE II. STUFF AT THE CERAMICS STORE

|                               | PRICE PER POUND |         |         | UNIT PRICE |          |
|-------------------------------|-----------------|---------|---------|------------|----------|
| Chemicals                     | 1 lb            | 5 lb    | 10 lb   | 50 lb      | 100 lb   |
| Aluminum Hydrate              | \$2.00          | \$1.50  | \$1.00  | \$28.00    | \$42.00  |
| Alumina Oxide                 | \$2.00          | \$1.50  | \$1.00  | \$50.00    | \$75.00  |
| Barium Carbonate              | \$2.00          | \$1.80  | \$1.50  | \$49.25    | \$78.00  |
| Bentonite                     | \$2.00          | \$1.50  | \$1.00  | \$35.00    | \$50.00  |
| Bone Ash                      | \$2.50          | \$2.40  | \$2.30  | \$85.00    |          |
| Borax (aka Na2B4O5(OH)4.8H2O) | \$2.00          | \$1.50  | \$0.80  | \$28.00    | \$49.00  |
| Calcium Carbonate (CaCO3)     | \$2.00          | \$1.50  | \$1.00  | \$15.00    | \$22.00  |
| Chrome Oxide (Green)          | \$6.50          | \$6.00  | \$4.75  | \$212.25   | \$375.00 |
| Cobalt Barbonate              | \$32.00         |         |         |            |          |
| Cobalt Oxide                  | \$55.00         |         |         |            |          |
| Colemanite (CaB3O4(OH)3.H2O)  | \$2.00          | \$1.50  | \$1.25  | \$30.00    | \$65.00  |
| Copper Carbonate              | \$5.20          | \$4.70  | \$4.60  |            |          |
| Copper Oxide (Black)          | \$5.20          | \$4.70  | \$4.60  |            |          |
| Dolomite (CaMg(CO3)2)         | \$1.00          | \$0.90  | \$0.80  | \$16.00    | \$30.00  |
| Ilmenite (FeTiO3)             | \$2.50          | \$2.00  | \$1.50  |            |          |
| Iron Oxide (Black)            | \$2.85          | \$2.25  | \$2.00  |            |          |
| Iron Oxide (Red)              | \$2.00          | \$1.50  | \$1.00  | \$35.00    | \$62.00  |
| Iron Oxide (Yellow)           | \$3.00          | \$2.50  | \$2.00  | \$80.50    |          |
| Lithium Carbonate             | \$7.50          | \$7.00  | \$6.00  |            | \$450.00 |
| Magnesium Carbonate           | \$4.25          | \$3.75  | \$3.40  | \$120.00   |          |
| Manganese Dioxide (60/8)      | \$2.00          | \$1.75  | \$1.50  |            |          |
| Manganese Dioxide             | \$2.25          | \$2.00  | \$1.50  |            |          |
| Nepheline (NaAlSiO4)          | \$2.00          | \$1.50  | \$1.00  | \$16.00    | \$26.00  |
| Nickel Oxide (Black)          | \$17.00         | \$15.00 | \$14.00 |            |          |
| Potassium Carbonate           | \$1.60          | \$1.50  | \$1.40  | \$47.50    | \$76.00  |
| Pyrophylite (Al2Si4O10(OH)2)  | \$1.00          | \$0.90  | \$0.80  | \$12.00    | \$16.00  |
| Rutile (TiO2, Light)          | \$3.50          | \$2.75  | \$2.25  | \$85.00    | \$150.00 |
| Sodium Carbonate (Soda Ash)   | \$2.00          | \$1.50  | \$0.80  | \$22.50    |          |
| Spodumene (LiAlSi2O6)         | \$2.00          | \$1.50  | \$0.90  | \$42.00    |          |
| Strontium Carbonate           | \$2.00          | \$1.50  | \$1.00  | \$48.00    | \$85.00  |
| Talc (Mg3Si4O10(OH)2)         | \$2.00          | \$1.25  | \$1.00  | \$8.00     | \$13.00  |
| Tin Oxide                     | \$9.00          |         |         |            |          |
| Titanium Dioxide              | \$3.50          | \$3.00  | \$2.60  | \$115.00   |          |
| Wollastonite (CaSiO3)         | \$2.00          | \$1.50  | \$1.00  | \$20.00    | \$35.00  |
| Zinc Oxide                    | \$4.00          | \$3.00  | \$2.50  | \$90.00    | \$160.00 |

# METAL FINISHING & ELECTROPLATING

Lot of good, basic chemicals used in this industry. Acids such as sulfuric, nitric, chromic and HCL. There are also bases, solvents, and many metal compounds including the palladium and platinum kind. I wasn't gonna include a section on this because I had no local sources and was not going to search elsewhere because I was really getting sick of researching for this damn book.

But right before this book went to press I got a nice present from a dear, sweet "Uncle." You know who I'm talking about. The book he sent was called: *Metal Finishing: Guidebook & Directory Issue*. The address of the publishers is:

660 White Plains Road Tarrytown, NY 10591 TEL: 914-333-2500 FAX: 914-333-2570

The reason I'm giving you the book publishers address is because I'll be damned if I'm gonna list every damn company I found in this book (read the previous paragraph about my considerable disgust on working further on this book). You can look them up yourself!

It seems that your Uncle has become quite an advocate of electrolytic chemistry and the places that sell the chemicals involved. He assured me that the places were very accessible to the public. And ya know what? He was, on the whole, correct. A lot of the chem suppliers listed were big chem companies such as Exxon, Oxychem etc. that I already know better than to call. The other chem companies listed did not seem to be any different from the big boys. They sold all the bad chems and metal compounds. They all seemed rather large in size. But when I called them up and let them know I was just a hobbyist looking for some plating chems, they said, "OK." Well, OK then! Thanks, Unkie! (I can call you Unkie, can I?)

Here are just a sampling of the sources in the book. This is nothing compared to all that are out there.

#### Alchem Corp.

525 West Liberty Street Medina, OH 44256

TEL: 330-725-2436 FAX: 330-722-2272

#### **Allied-Hunter Corp**

428 Pennsylvania Avenue Ft. Washington, PA 19034-3406

TEL: 215-646-4700 FAX: 215-628-4040

TOLL FREE: 1-800-887-6633

#### Callery Chemical Co.

P.O. Box 429

Pittsburgh, PA 15230 TEL: 412-538-3510

FAX: 412-967-4188

### Electrochemicals

5630 Pioneer Creek Drive Maple Plain, MN 55359 TEL: 612-479-2008

FAX: 612-479-3344

TOLL FREE: 1-800-621-0510

# Goldschmidt Industrial Chemical Corp.

941 Robinson Hwy. P.O. Box 279

McDonald, PA 15057-0279

TEL: 412-796-1511 FAX: 412-922-6657

TOLL FREE: 1-800-426-7273

# Gumm Chemical Oc., Inc.

538 Forest Street Kearny, NJ 07032 TEL: 201-991-4171

FAX: 201-991-5855

TOLL FREE: 1-800-223-4866

#### ICI Americas Inc.

Silverside Road

Wilmington, DE 19897 TEL: 302-887-4130

FAX: 302-887-5302

## **Kraft Chemical Co.**

1975 N. Hawthorne Avenue Melrose Park, IL 60160

TEL: 708-345-5200 FAX: 708-345-4005

#### McGean-Rohco Inc.

2910 Harvard Avenue Cleveland, OH 44105-3010

TEL: 216-441-4900 FAX: 216-441-1377

TOLL FREE: 1-800-932-7006

# **Phillip Brothers Chemicals**

1 Parker Plaza Fort Lee, NJ 07024 TEL: 201-944-6020 FAX: 201-944-7916

#### Southern Industrial Chemicals Inc.

1450 Marietta Blvd. P.O. Box 93069

Atlanta, GA 30377-3069

TEL: 404-351-9770 FAX: 404-351-9887

TOLL FREE: 1-800-394-9770

#### Taskem Inc.

4639 Van Epps Road Brooklyn Heights, OH 44131

TEL: 216-351-1500 FAX: 216-351-5677

#### Technic Inc.

One Spectacle Street

P.O. Box 9650

Providence, RI 02904 TEL: 401-781-6100

FAX: 401-781-2890

#### Univertical Corp.

14841 Meyers Road Detroit, MI 48227-3994 TEL: 313-491-3000 FAX: 313-491-7734

#### **Uyemura International**

2625 East Cedar Street Ontario, CA 91761

TEL: 909-923-2294 FAX: 909-923-7643

TOLL FREE: 1-800-486-4842

# **Epilogue**

Well, folks. There you have it. Another book for your reading pleasure. Just between you and me, I wrote this whole thing just so I wouldn't have to answer the ever present "Uh, where can I get such-and-such?" question. Now you know. Don't ever ask me again!

And, as usual, if you are one of those people that do not like what this book tries to accomplish, then by all means change huge aspects of our economy to counter it. Won't make a bit of difference to me. I can always write another book.



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